ABSTRACT OF A

# Lecture

ON

# THE OCCURRENCE OF THE MITRAL DIRECT OR PRESYSTOLIC MURMUR WITHOUT MITRAL LESIONS.

By AUSTIN FLINT, M.D.,

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THE case at the hospital which was recently brought before you, in which were four heart murmurs referable to the left side of the heart, and associated therewith paroxysms of angina pectoris, is doubtless fresh in your recollection. The patient, as you will remember, died suddenly in a paroxysm of angina, and the case furnished an occasion for considering that affection. I have now the heart before me. You see at once that it is considerably enlarged; the weight is 17½ oz. The enlargement is chiefly of the left ventricle. The ventricular cavity is much dilated, the dilatation evidently predominating over the hypertrophy. Directing attention to the aortic orifice, you perceive that the sigmoid walls are thickened and contracted. There had been, evidently, considerable regurgitation, and this stands in a special causative relation to the hypertrophy and dilatation of the left ventricle. The inner surface of the aorta above the aortic orifice is thickened and velvety. The openings of the coronary arteries are much contracted, and this, taken in connexion with the insufficiency of the aortic valves, must have had for a consequence a deficient supply of arterial blood to the muscular structure of the heart. In my remarks on angina pectoris I stated that, as it seems to me, the most rational view as regards the pathological condition with which paroxysms of angina are connected is to attribute them to ischæmia of the heart. That condition must have existed in this case, and the appearances therefore go to sustain the ischæmic theory.

Let us now direct our attention to the mitral orifice. Here there is not the slightest appearance of lesion. The mitral curtains are perfectly normal. Moreover, before the ventricular cavity was laid open, the water test showed competency of the mitral valves. The specimen has for me great interest in connexion with these facts. The patient, in this case, had undoubtedly both a mitral systolic and a mitral presystolic murmur. I found these murmurs present on repeated examinations, the presystolic murmur varying at different times in its loudness, but never absent. The presence of both murmurs was verified by many others. The case served to illustrate their differential characters to clinical classes. It so happened that Mr. Gould of London visited the ward on the day before the sudden death of the patient, and he listened to the heart as presenting a good example of the presystolic murmur. This murmur had, in this case well marked, its usual distinctive features—namely, a rough vibrating quality, resembling, in this respect, the sound produced by throwing the lips into vibration with the expired breath. From this peculiar quality I have been accustomed to distinguish the murmur as a blubbering sound. Now, the question arises, How could this murmur have been produced without any mitral lesion? I find no difficulty in answering this question, and I ask your attention now especially to the explanation of the fact that a mitral presystolic murmur may occur without any mitral lesion.

In 1862, in an article on "Cardiac Murmurs," published in the July number of the *American Journal of the Medical Sciences*, I reported cases illustrative of the fact just stated. I am not aware of any case having been reported prior to that date in illustration of this fact, nor subsequently by any other observer. The fact was stated in the first edition of my work on the "Practice of Medicine," published in 1866, as well as in the subsequent editions. I have met with several additional instances within the last twenty years.

As preparatory for the explanation, the mode of production of the murmur, when it represents mitral lesions, is to be borne in mind. Referring to the characteristic blubbering murmur, I believe it to be produced by vibration of the mitral curtains. The mechanism is the same as in the imitation of the murmur by the vibration of the lips with the current of air in expiration. In thus imitating the murmur, note with how feeble a current of air a loud blubbering sound is produced by the vibration of the lips. This at once disposes of the statement which has been made that the current of blood produced by the auricular contraction is too feeble to give rise to so loud a murmur as is the mitral presystolic in many cases. Accepting the mode of production of the murmur as just stated, it follows that when the murmur is organic the mitral curtains must be flexible, that is, capable of vibrating. Whenever the murmur is due to lesions, the flexibility of the curtains is to be inferred, and generally it is a fair inference that there is contraction of the mitral orifice in consequence of adhesions at their sides, being what is known as the button-hole aperture. If the curtains be rigid and notably contracted, the characteristic murmur is not present; either there is no appreciable murmur, or it is a blowing murmur. It may be wanting, and hence absence of the mitral presystolic murmur is not positive proof that mitral obstructive lesions do not exist.

Now for the explanation of the mitral presystolic murmur without mitral lesions. In all the instances which have come under my observation there have been aortic lesions permitting regurgitation, as in the heart which is now before me. With regard to this specimen, consider the physical conditions in life at the instant when the auricular contractions took place. The left ventricle was filled with blood from the current passing from the auricle to the ventricle through an unobstructed orifice by gravitation, and, in addition, the regurgitant current from the aorta. As a consequence, the mitral curtains were floated away from the ventricular walls, and were not only approximated but in absolute contact. Recollect the physiological experiment by which it is shown that the mitral valves may be completely closed by injecting a liquid into the left ventricle through the mitral orifice. These conditions existing, the auricle contracts and forces an additional quantity of blood into the ventricle. This mitral direct current passes between the valvular curtains which are in apposition, and throws them into vibration precisely as the lips are made to vibrate with the breath. If I have made myself clearly understood, you will admit, as it seems to me, that the explanation is rational and adequate. Looking no further than the mitral orifice, the murmur is inorganic or functional, but, occurring without mitral lesions, it is an effect of aortic lesions allowing free regurgitation. I have as yet met no instance in which aortic regurgitant lesions did not coexist. Under these circumstances the presystolic murmur is apt to be variable in its intensity at different times, and it may not be always present—that is, it is liable to come and go according to variations in the physical conditions involved in the mode of its production.

To this statement concerning the variableness and intermittency of the mitral presystolic murmur without mitral lesions, I will add a fact, which I do not recollect to have seen stated by any author except myself, relating to the murmur when it represents mitral obstructive lesions. The fact is this, the murmur, in the progress of the cardiac affection, may become variable and intermittent. The fulness and cessation of the murmur, under these circumstances, are not of good omen, but quite the reverse. They denote feebleness of the auricular contractions from dilatation. The coexisting signs and symptoms will be found to sustain this view. Do not, therefore, fall into the error of giving to a patient, or to friends, false encouragement when, connected with mitral lesions, a murmur which has been loud and constant becomes feeble or ceases to be heard.

In the case which furnished the specimen before us there was also a mitral systolic murmur, and, as has been stated, the water test did not give evidence of insufficiency of the mitral valves. How is this fact to be explained? I do not propose to discuss the various explanations of the production of a mitral systolic murmur without mitral lesions. Suffice it to say that in this case, taking into view the considerable dilatation of the left ventricle, it seems to me probable that, although the ventricle held water when filled from an open-

ing made through the apex, the ventricular contraction in life occasioned some regurgitation. A regurgitant stream, be it never so small, may give rise to a murmur. I submit this explanation without undertaking at this time to account for the apparent incongruity that the mitral valves may admit of some regurgitation during life, and yet be found competent after death.

# Clinical Lecture
ON
# THE MECHANICAL TREATMENT OF CARIES OF THE LUMBAR VERTEBRÆ.

*Delivered on December 7th, 1882,*

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GENTLEMEN,—Let us examine the patient before us, with the hope of eliciting facts that will be of service in determining upon a plan of treatment. To save time I will tell you that this little four-year-old girl is suffering from chronic spondylitis of the first, second, and third lumbar vertebræ. The disease has existed for more than a year. It is slowly but surely affecting a solution of anterior vertebral continuity, while the posterior part of the column has remained intact. The arches and spinous processes of the involved vertebræ retaining their integrity, there is a sinking of the bodies of the healthy segments of the spine above, and a forward curvature of that part of the column. As a result we have a corresponding posterior projection, which in this case, though well marked, has not proceeded so far as to render its ultimate obliteration hopeless. If we closely watch our little patient as she moves about from place to place, picking up pennies from the floor, you can observe two things. First, all her movements are conducted with unusual care for a child, and with great regard to the avoidance of any sudden motion or jarring of her body; secondly, owing to a spasm of the muscles of the back, there is no lateral or antero-posterior flexion and extension in the lower dorsal or lumbar regions. With her spine held rigid she squats upon the floor instead of bending over in the usual manner. Upon placing her in the ventral decubitus, and attempting backward extension of the dorso-lumbar vertebræ, we are at once met with opposition on the part of the tetanised muscles. Furthermore, the patient shows evident signs of discomfort. There is a reflex muscular spasm which prevents movement of the vertebræ. This condition of reflex spasm, securing articular immobility, can also be observed, as I have told you, in cases of ostitis of the hip, knee, or ankle. It is said to be Nature's method of placing the joint at rest and securing freedom from irritation to the diseased structures, which would otherwise result from articular motion. Upon this observation alone has been built up the prevailing system of mechanical therapeutics as applied to the treatment of chronic inflammations of the joints. To carry out this idea, "fixation" splints and "absolute immobility" splints and dressings have been devised for all the principal joints of the body, and are to-day in use throughout the civilised world.

There still remains another principle which is largely used in mechanical treatment of articular inflammations, which we have not yet elicited from the examination of our patient. If, with the diseased segments intervening, we make traction upon the spine in opposite directions (extension and counter-extension), and continue it for a sufficient time, we will find that the tetanised muscles will gradually soften and the patient will experience a greater degree of comfort and less apprehension. This observation has in recent times added another idea to the mechanical treatment of articular diseases—viz., that of extension for the relief of reflex muscular spasm. There are, therefore, two principal ideas involved in the prevailing methods of mechanical treatment: "traction" (extension) and "fixation," and these two ideas have been based upon the observations we have just made.

The point which I wish to make now is that these observations, though correct so far as they go, do not place us in possession of the whole truth. In carrying out this idea of extension, surgeons have generally failed to recognise the fact that the "extension" enforced by means of their mechanical appliances was not the same kind of extension which they had previously made with their own hands, and ascertained to be so acceptable to the patient. Manual extension is elastic; the prevailing mechanical extension is rigid. Let us examine our little patient still further, and see if we can elicit other facts which will point to wider truths and serve as guides to more rational treatment. As she stands in front of me I place my hand upon her thorax, just under the armpits, and lift gently upwards. Holding her with a firm and steady hand in this position, let us observe the result. At once she says "that feels good." In support of the truth of her statement let me incidentally tell you what happened when I first suspended her some weeks ago for the purpose of taking a plaster mould of her body. So great was the relief afforded that within two or three minutes after she was placed in the apparatus and the superimposed weight removed from the diseased vertebræ she fell asleep, and though we continued our work, she remained in this condition until she was taken out of the swing.

Continuing to hold my little patient in this position, the reflex muscular spasm which has existed all along is gradually and surely overcome, and now my assistant, laying hold of her pelvis, makes forward, backward, and lateral movements of the spine in the affected regions, and, as you see, apparently without the slightest inconvenience or discomfort to the patient. Thus we have demonstrated that "fixation" of the diseased vertebræ is not essential to the comfort of the patient, and that manual "extension" (which is necessarily elastic extension), combined with thorough support, are really the important factors in overcoming reflex muscular spasms, abolishing the feeling of apprehension and affording entire comfort to the patient.

Now, let us summarise the results of our observation. By efficient manual extension and support, relieving the involved segments of the spine from superimposed weight, we have, without "fixing" or "immobilising" the carious vertebræ, secured entire comfort to the patient. The traction used to overcome reflex muscular spasm has been made with our hands, and hence has necessarily been elastic; there has been no rigid extension or fixation, only efficient support and elastic extension; neither have we interfered in any way with the proper performance of function by the healthy part of the spine. Could this condition of perfect comfort, so easily brought about by skilful manipulation of the inflamed vertebræ, be prolonged indefinitely, all must agree that it would be of the greatest advantage in promoting speedy recovery. We would thus be enabled at once to so circumstance the diseased spine that its motions would not be materially interfered with, and hence an important aid to the maintenance of a normal circulation would be retained throughout the period of treatment. The point which I here wish to emphasise is that articular motion throughout the body, both in the lower animals and in man, like the analogous movements in plants, is of much greater importance than has hitherto been supposed. It aids in the maintenance of a normal circulation, and hence in supplying the requisite nutrition and sustaining a favourable temperature for the growth and development of the individual, the renewal of tissues subject to successional decay, and the carrying on of reparative processes in case of disease. Furthermore, I shall demonstrate to you, that articular motion in disease, in conjunction with muscular action, can, by the aid of properly constructed mechanical appliances, be made to subserve the same general and local purposes which it does in health. One of the main features of this disease, as I have already pointed out, is the lowering of general and local nutrition. Hence, if we can by any possible means secure all the benefits which the united testimony of the profession have ascribed to "rigid extension" and "fixation," without "fixation" and without "rigidity," we will have at once more nearly approximated the condition of health, instead of having imitated the conditions we find in disease. We will have thus gained a great practical point, for "fixation" of a joint necessarily has a depreciating influence upon the

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local nutrition, and "rigid extension" does not reduce the jar incident to locomotion to the minimum.

We must substitute some mechanical devise for this manual support, and for obvious reasons it is important that the patient be permitted to walk; that the support used be portable. To accomplish this by means of a single splint or apparatus, and to have the force which is exerted upon the spine in the various directions elastic, as it is when the hands are used for support, would seem to be a somewhat difficult mechanical problem to solve. That this is possible I wish now to demonstrate.

As I have elsewhere described,[1] the dressing to be worn can be applied directly to the patient, but for reasons which I cannot here discuss, the plan that I shall now employ is to be preferred. It is essential to get an accurate cast of the body upon which we can fashion our mechanical prop, so that it will fit the patient when applied. To obtain a cast we must first make a mould of the body. A tightly fitting knit shirt is now drawn over the cast, and we proceed to apply over it rollers of plaster bandage. Having applied a thin but uniform layer of gypsum over the entire cast, four pairs of light steel brackets are placed in position upon it. These have thin perforated sheet-copper arms attached to them, in order that they may be securely held in position by layers of plaster bandage passed over them (Fig. 1). They are arranged in pairs one above the other (*vide* dotted lines, Fig. 6), and temporarily held in place with a rubber band (such as is used to hold bundles of papers together), slipped over the cast. Two pairs of brackets are placed behind, one upon either side of the spine, and one on either side of the body, in front of the arms. These brackets are for the purpose of retaining the elastic spinal extension bars, presently to be described, in position. A wet roller, saturated with gypsum, is now carried over the brackets, the projecting part of them only remaining uncovered. This holds them securely in position. When the dressing has become thoroughly dry a circumferential division of it and the shirt into an upper and lower segment is made at the smallest part of the waist. A longitudinal section, four or five inches in width, is next cut out of each segment in front. This permits of their easy removal from the cast without disturbing their shape. As will be seen later on, the same is true in regard to their application to, and removal from, the patient. At this stage we have to call in the aid of an instrument maker. It will be his business to fit and attach metallic clasps to these segments. The clasps extend across the space left by the removal of the wide section of plaster dressing in front, thus completing the circumference of the body. Three of these are required, two for the upper and one for the lower segment (*vide* Fig. 2). The ends of these clasps, upon one side, are secured to the plaster dressing by hinges; and upon the other side are kept from sliding upward or downward by steel pins projecting through slots made in them. When the segments are applied to the patient, the clasps are closed and secured in position by means of strong bands of elastic webbing buckled over them, as can be seen in Fig. 2. This arrangement permits of the easy removal and reapplication of the segments at the pleasure of the surgeon. The rubber bands admit of the necessary expansion of the thorax with each inspiration, and at the same time the efficiency of the support is not invalidated. I should also call your attention to the fact that the clasps are curved, so as to correspond to the contour of the chest and abdomen. This prevents undue pressure upon these parts, thereby avoiding the objectionable feature common to all corset casings used in securing spinal supports in position. The segments having been placed in position on our little patient, and held by the bands of elastic webbing as above indicated, we now adjust the elastic extension bars. These are four in number. They consist of steel rods turned up at one end, as shown in Fig. 3. Each is provided with a nut and strong spiral spring.

FIG. 1.

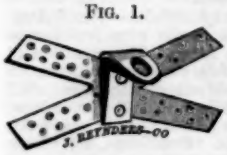
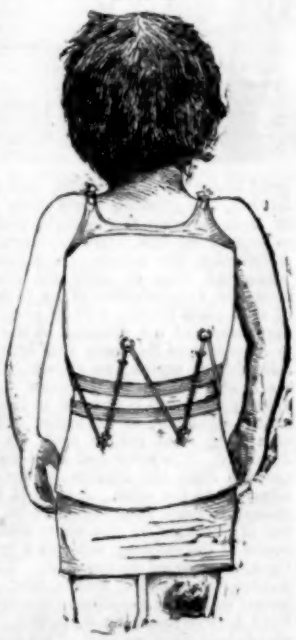



FIG. 2.

FIG. 3.

They are secured in position by passing their upper and lower ends through the perforations in the projecting part of the brackets, that have been previously embedded between the layers of plaster bandage (Fig. 7). The weight of the body, which is now sustained by the upper segment resting on the springs, serves to keep the extension bars in place. With a wrench the nuts may be moved up or down, and any desired amount of elastic extending force exerted. The improved position gained by suspension is thus preserved. By moving up the nuts from time to time, the kyphotic curve may be still further reduced without producing the slightest irritation. The perforations in the brackets through which the extension bars pass are large enough to admit of a very considerable amount of motion, while at the same time continuous elastic extension of the spine is maintained. You will observe that, by means of this mechanical appliance, we have placed the spine under very nearly the same conditions that it was when I extended it with my hands, and my assistant made forward and backward movements of the involved part.

FIG. 4.



When rotation of the spine exists in conjunction with posterior curvature, as in this case, it can be very readily overcome in the following simple manner. To the summit of one or more of the extension rods, a nut, bearing two arms curved upward so as to make almost a complete ring (Fig. 4), is screwed. Rubber bands, such as are procurable at stationery stores, are now passed from the summit of one steel rod to the base of another, as seen in the figure. It should be remembered that these do not oppose the action of the steel springs, as would be the case if they were attached directly to the upper and lower segments of the jacket. They are attached to opposite ends of rigid steel bars. Any desired amount of elastic rotating force can thus be exerted, while at the same time continuous elastic extension of the spine is maintained.

Occasionally you will meet with cases in which the spinal column will be tilted to one side (Fig. 5). This is not un-

[1] The Medical News, Oct. 14th, 1882.

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frequently due to unilateral weakness of the muscles of the lower dorsal and lumbar regions. The improved position gained by suspension is not maintained, no matter with how much skill the dressing is applied. And for this reason the power of the spinal lever is not applied below, or external to the weakened muscles. Were it practicable to carry a rigid spinal prop below the hip joints down upon the thighs, the improved position of the spine gained by suspension would be readily maintained. In a case such as is represented in Fig. 5, it will be found by placing the forefinger of one

FIG. 5.

FIG. 6.

hand under the right axilla, and that of the other on the left hip, and exerting slight cross pressure, the patient will at once assume the upright position. As a permanent substitute for this finger pressure, I have used with entire satisfaction the following appliance. In the centre of a perforated strip of light tin about four or five inches long and three-eighths of an inch wide, a short thin piece of steel plate bearing a small ring is soldered. During the application of the dressing to the plaster cast one of these is incorporated between the layers of bandage over the left gluteal region, as shown by dotted lines in Fig. 5. As is also shown in the same figure, a nut of the form already described is screwed to the top of the extension rod on the right side of the spine. To this is attached one end of a long solid rubber cord, six or seven millimetres in diameter. The other end is passed through the ring which projects from the surface of the jacket below, and then attached to the shoe. A strip of non-elastic webbing, long enough to reach from the ankle to the knee, is sewed to the top of the shoe on the outer side. This is passed to the inside of the stocking through a button-hole in it just above the upper margin of the shoe. The free end of the strip of webbing is provided with a ring. Through this ring the lowest end of the elastic cord is passed and drawn sufficiently tight to overcome the distortion, when it is fastened by a simple half hitch, or knot. This elastic cord does not oppose the lifting action of the spiral springs as it would were it attached directly to the upper segment of the jacket.

THE last Hospital Saturday collection at Cambridge amounted to £207 18s. 1*d.*—a slight increase on the sum raised on the previous occasion.

# PNEUMONIA.[1]

BY FRANCIS DELAFIELD, M.D.,
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WE use the word pneumonia as a general term to designate the inflammations of the lungs. Anatomically there are four varieties of pneumonia: intra-alveolar pneumonia, interstitial pneumonia, the broncho-pneumonia of children, and tubercular pneumonia. You will observe that I do not use the words croupous and catarrhal pneumonia, and this is with design, for I believe that these terms are utterly inappropriate when applied to inflammation of the lung, and have led to much unnecessary confusion.

The most practical division of pneumonia, however, is according to the clinical groups in which the cases present themselves to us. We will, therefore, describe: The lobar pneumonia of adults; the secondary and complicating pneumonia of adults; the pneumonia of heart disease; the interstitial pneumonia of adults; the broncho-pneumonia of children; acute tuberculosis of the lungs; acute pulmonary phthisis; chronic pulmonary phthisis.

*The Acute Lobar Pneumonia of Adults.*—The inflammatory process regularly attacks at the very first a considerable portion of one or both lungs. The situation of the disease can be seen from the following figures given by Juergensen from an analysis of 6666 cases: Right lung, 53·7 per cent.; upper lobe, 12·15; middle lobe, 1·77; lower lobe, 22·14; whole lung, 9·35. Left lung, 38·23; upper lobe, 6·96; lower lobe, 22·73; whole lung, 8·54. Both lungs, 8·07; both upper lobes, 1·09; both lower lobes, 3·34 per cent. In rare cases nearly the whole of both lungs will become inflamed at the very outset. The inflammatory process involves regularly the air vesicles, air passages, bronchi, interstitial connective tissue, and pulmonary pleura. It is customary to describe the inflammation as passing through four stages: congestion, red hepatisation, grey hepatisation, and resolution.

*Congestion.*—This stage usually escapes our observation for the reason that the patients do not die until later in the disease. The best example of the lesion that I have seen occurred in a woman, who died five hours after the initial chill. The right upper lobe was found firmer and more consistent than the rest of the lungs, but not hepatised. It was moderately congested and œdematous. The air vesicles contained a little granular matter, a little reticulated fibrine, a few pus cells, and a few epithelial cells, but not enough to fill the vesicles. There was a large number of white blood-globules in the capillary bloodvessels, and a swelling of the epithelial cells on the walls of the air vesicles. This first stage of congestion lasts but a few hours and is succeeded by

*Red Hepatisation.*—The lung is now solid. Its cut surface, when fresh, is dry, granular, and red. The granules correspond to plugs of inflammatory matter which fill the air vesicles, air passages, and small bronchi. These plugs consist of pus cells, fibrine, epithelial cells, and red blood-globules. The air vesicles are not only filled, but distended by these inflammatory products, so that the inflamed portion of lung is voluminous and may compress the uninflamed portions. The interstitial connective tissue between the lobules of the lung is infiltrated with pus and fibrine, the pulmonary pleura is coated with fibrine. Of the fatal cases of pneumonia, in which I have made autopsies, about one-fourth have died in the stage of red hepatisation, and the duration of the disease in these cases has been from twenty-four hours to eleven days.

*Grey Hepatisation.*—The lung remains of the same consistence, solid and unaerated, but its colour changes. Portions gradually change from red to grey, so that the lung is first mottled red and grey, and then completely grey. The pulmonary pleura continues to be coated with fibrine; the small bronchi, air passages, and air vesicles are still filled with pus, fibrine, and epithelium, and the interstitial tissue is still infiltrated with fibrine and pus. The only changes are that the red globules have lost their colouring matter, the bloodvessels contain less blood, the products of inflammation commence to undergo granular and fatty

[1] A lecture delivered at the College of Physicians and Surgeons, New York.

degeneration. I have found that about one-half of the fatal cases die in the condition of mottled red and grey hepatisation, and about one-fourth in the condition of complete grey hepatisation. The deaths with the mottled lungs occurred from the second to the eighteenth day, with the grey lungs from the fourth to the twenty-fifth day.

*Resolution.*—If the patients recover, the lung passes from the condition of grey hepatisation into that of resolution. This stage of the inflammation usually escapes our observation, but occasionally patients die from accidental causes, and in this way I have seen a few examples of this condition. The lung is no longer completely solid or completely grey, but there is a mottling of solid grey and aerated red portions of lung. Some of the air vesicles are completely empty, some contain a little granular matter, some fatty epithelium and pus, some are still filled with the products of inflammation.

The lung may remain in the condition of gray hepatisation for two or three weeks. It then becomes very white and dry, but there is no special change in the inflammatory products. I can see no reason for believing that this form of pneumonia ever passes into the condition of cheesy degeneration.

There are rare cases of lobar pneumonia in which fibrine is produced in unusually large amount, portions of lung tissue are compressed and become necrotic. In this way little cavities are formed containing fragments of dead lung tissue. Later the walls of these cavities are infiltrated with pus, so that abscesses are formed.

It is also possible for the inflammatory process to be characterised by an unusual production of pus, and even an infiltration of the walls of the air vesicles with pus. But I have never seen this condition reach such a degree as to form abscesses. The small bronchi are regularly filled with pus and fibrine, and in some cases the inflammation of the large bronchi becomes quite a feature of the disease. The inflammatory process may be catarrhal with a production of mucus, or croupous with the production of large cords of fibrine, which fill the bronchi. The pulmonary pleura is regularly coated with fibrine, but in some cases the pleurisy is developed to an unusual degree. Both pulmonary and costal pleura may be coated with a thick layer of fibrine and pus, and the pleural cavity may contain a considerable quantity of serum.

In rare cases lobar pneumonia is followed by gangrene of the lung. It is still unknown how this change is effected.

From what has been said it is evident that in lobar pneumonia we have an example of that form of inflammation in which the blood and the bloodvessels take the principal share in the inflammatory process, while the tissue of the organ remains passive. The pus and fibrine are derived directly from the blood; it is only the new epithelial cells that are produced from the lung tissue. With few exceptions the blood continues to circulate through all the vessels of the lung so that no part of the organ loses its vitality. When the inflammatory process, therefore, has run its course and the products have been absorbed the lung is left unchanged in its structure.

*Etiology.*—Lobar pneumonia occurs in nearly all climates, warm as well as cold. In the United States it is even more prevalent in the Southern States than in the Northern. To ascertain the prevalence of the disease in New York city, I have examined the records of the Board of Health for a period of four years, beginning on March 1st, 1871. These records give all the fatal cases of pneumonia occurring during that period. After excluding all the secondary and complicating pneumonias, the whole number of fatal cases for the four years was 7873. Of these 3623 were in children under five years old. In persons over five years old the great majority of deaths occurred in March, April, May, November, December, January, and February. January showed the largest number of cases, then February, April, May, and March in order. Comparing the mortality with the daily temperature and the daily range of temperature, it was found that the number of cases of pneumonia increased regularly with the lowness of the temperature and the extent of its daily range.

There can be no question that in a moderate number of cases of pneumonia the disease is developed within a few hours after exposure to cold and wet, but in many other cases no such exposure can be discovered. There is a difference in different years and in different places as to the frequency and mortality of the disease. Occasionally local epidemics occur in a single building or a single town.

Considerable attention has been directed lately to the question of the character of pneumonia, whether it is a general disease with a characteristic local lesion, or a local lesion attended with constitutional symptoms. It is not necessary for me to lay before you the reasons for these two opinions. It is sufficient to say that the prevailing opinion is that pneumonia is a general disease, while I am still of the belief that it is a local inflammation.

As a rule, children under five years old have broncho-pneumonia; persons between five and fifteen years of age may have either lobar pneumonia or broncho-pneumonia; persons over fifteen years old have lobar pneumonia.

*Physical Signs.*—In the stage of *congestion* the regular signs are moderate dulness and a subcrepitant râle. As soon as there is pleurisy a crepitant râle is developed.

While in the condition of *red and grey hepatisation*, the inflamed lung gives dulness on percussion, increased vocal fremitus, bronchial voice and breathing.

In the stage of *resolution* the dulness and the vocal fremitus decrease, the bronchial voice and breathing become less and less marked, crepitant, subcrepitant, and coarse râles are heard.

In the stage of congestion there may be no dulness nor râles, nothing but a change in the breathing. The respiratory murmur may be feeble, or harsh and exaggerated. Occasionally a bronchitis of the larger tubes is developed at the outset of the disease, and then we hear coarse râles all over both lungs.

In the stages of red and grey hepatisation the percussion note, instead of being dull, may be flat, tympanitic, amphoric, or cracked pot. Vocal fremitus, instead of being increased, may be decreased. There may be neither bronchial voice nor breathing.

In the stage of resolution, dulness, crepitant râles, and feeble breathing may persist for an unusual length of time.

All the physical signs are apt to be obscure in old persons, and may even be absent altogether.

*Rational Symptoms.*—The invasion of the disease is in about one-fourth of the cases preceded by an irregular fever with moderate prostration, lasting from one to four days. In the rest of the cases the invasion is sudden. One or more rigors of greater or less severity are the first symptoms of the disease in most cases. (Lebert 92 per cent., Grisolle 80 per cent.) It is customary to reckon the duration of the disease from the time of the initial chill. The temperature rises at once, and usually reaches its maximum by the second or third day. After this it is a continuous fever, with evening exacerbations, until defervescence takes place. Defervescence may take place at any time from the second to the eighteenth day, but in more than half the cases it occurs on the seventh, fifth, eighth, or sixth days (Juergensen). The fever usually begins to subside in the evening, and requires from six to forty-eight hours for its disappearance. After defervescence the temperature may fall for a few hours below the normal. A temperature of from 99° to 104° F. may be called the normal temperature of lobar pneumonia in adults. Higher temperatures indicate abnormal forms of the disease. If the inflammation extends and involves other parts of the lungs, then the fever is protracted, or returns again after defervescence. In exceptional fatal cases the temperature is below the normal for two or three days before death. Sweating accompanies the fever in a considerable number of the cases. It is often profuse and persistent. In other cases, however, the skin is always hot and dry. Pain is regularly developed within twelve hours after the chill. It is sometimes slight, sometimes severe, sometimes absent. It is referred to the affected side, usually to the region of the nipple. This pain is apparently due to the associated pleurisy. The pulse should be somewhat increased in frequency and of fair strength—about 100. A feeble pulse of over 120 should always excite apprehension, even if the patient is apparently doing well. Slow pulses of 60 to 70 are met with in exceptional cases. The respiration at once becomes rapid, rising to 30 or 50. Not only is the breathing rapid, but it may be laboured, especially during the first twenty-four hours of the disease. In some cases the oppression and dyspnœa are at this time very urgent, so much so that the patient feels that he will die unless immediate relief is afforded. Cough is developed within a few hours, moderate in some cases, harassing in others, often absent in old people. With the cough is an expectoration, at first white and mucous, later mixed with blood and pus so as to have a yellowish or reddish colour. The sputa regularly consist of two parts, a thin watery fluid and little rounded pellets of more consistent

and tenacious mucus. In bad cases the whole sputa may be thin and dark-coloured, like prune juice. I have seen in one case an hæmoptysis of about three teaspoonfuls of pure blood at the outset of a lobar pneumonia. Cases with nothing but white mucous sputa are not uncommon; and in old persons there is often no expectoration at all. The cheeks are usually flushed. The tongue is coated with a white fur, and in severe cases becomes dry and brown. The appetite is lost, and vomiting may be repeated several times at the beginning of the disease. The urine is diminished in amount, high-coloured, and occasionally contains albumen and casts. Cerebral symptoms are present in greater or less degree in most of the cases. A peculiar irritability and restlessness with inability to sleep are very common symptoms. In more severe cases headache, delirium, stupor, and coma are also present. Such cerebral symptoms are especially marked in alcoholic patients, in old persons, and with pneumonia of the upper lobes.

*Complications.*—Pleurisy with a considerable exudation of serum complicates about 12 per cent. of the cases (Grisolle). It is apt to persist after the resolution of the pneumonia. If it is a purulent pleurisy, the patients usually die. Pericarditis, usually with the production of fibrine without much serum, complicates some cases, especially if both lungs are inflamed. In some cases the only evidence of such a pericarditis is the fact that the patient seems more seriously ill. In other cases the pericardial friction sound is heard, the pulse becomes more rapid and feeble, the blood accumulates in the veins, the breathing is more rapid and laboured. Meningitis may be developed sometimes without symptoms, sometimes with severe headache, great restlessness, delirium, contractions of the voluntary muscles, stupor, and coma. Jaundice is observed in a moderate number of cases. It may complicate mild examples of pneumonia without apparently adding anything to the patient's symptoms; or it may appear in the course of a more severe pneumonia and be attended with more marked cerebral symptoms. The kidneys may become the seat of a moderate degree of parenchymatous nephritis, or they may have been in the condition of chronic diffuse nephritis before the pneumonic attack. In the latter case there may be general convulsions.

*The Course of the Disease.*—In regular cases, after a few hours or days of irregular fever and prostration, or without any premonitory symptoms, the patient is seized with one or more rigors, followed by a febrile movement. He at once feels seriously ill, may vomit, and complains of oppression and difficulty of breathing. The next day, after a restless night, the patient lies in bed with flushed face, a hot, dry skin, a tongue coated and white, rapid breathing, a temperature of 100° to 103°, a pulse of about 100, and full; there is pain in the affected side of greater or less severity, cough with mucous expectoration, and the physical signs of congestion, or of red hepatisation. All these symptoms continue; the temperature from 100° to 104°; the pulse 90 to 100; the breathing 25 to 40. The physical signs are those of red and grey hepatisation. The sputa have the colour and shape characteristic of the disease. On about the seventh day of the disease defervescence takes place. The temperature falls to the normal, or below it; the pulse and breathing become less rapid; the tongue begins to clean off; the restlessness disappears, and the patient feels quiet and comfortable. The physical signs of resolution continue for a few days, then disappear, and the patient is fairly convalescent.

*Cerebral Cases.*—In patients addicted to the use of alcohol, in old people, and in cases of pneumonia of the upper lobes, cerebral symptoms are especially marked. Professional and business men are more likely to have cerebral symptoms than are mechanics and labourers. In many of these cases the extent of lung inflamed is small in proportion to the severity of the symptoms. Besides the restlessness, sleeplessness, headache, stupor, delirium, and coma which characterise these cases, there are usually a high temperature, a rapid and feeble pulse, and a dry tongue. Delirium and stupor may persist for several days after defervescence.

In irregular cases the physical signs of consolidation may be slow in appearing. You may examine a patient's chest day after day and find no evidence of solidification of the lung. The longest delay of this kind which I have seen was for eight days. Resolution may be delayed for two or three weeks after defervescence, with persistence of the physical signs of consolidation.

*The Pneumonia of Old People.*—In people over seventy years old the disease is apt to run an irregular course. The chill, the pain, the cough, the sputa, and the physical signs may all be absent. Fever, cerebral symptoms, a rapid and feeble pulse, rapid breathing, and marked prostration may be the only symptoms. I have seen such an irregular course of the disease in persons not over fifty years old. There are also curious cases reported of pneumonia in old persons, who only seem feeble but are not confined to bed. They present no symptoms to excite suspicion until they suddenly die, and the pneumonia is discovered at the autopsy.

*Typhoid Pneumonia* occurs usually in epidemics. The cases are characterised by the severity of the constitutional symptoms and the rapid prostration.

*Complicated Cases.*—Meningitis, pericarditis, pleurisy with effusion, cardiac disease, and chronic renal disease all may alter the regular course of the disease in ways which have been already described.

*The Fatal Cases of Pneumonia.*—Pneumonia seems to prove fatal in several different ways. There are cases in which death seems to be directly due to the large area of lung tissue, which is infiltrated with inflammatory products and rendered incapable of performing its natural functions. There are cases in which only a part of one lobe is affected, and yet the constitutional symptoms are very marked and seem to destroy life by their severity. Death is due to one of the complicating lesions: meningitis, pleurisy, pericarditis, cardiac disease, chronic renal disease. A certain number of cases of lobar pneumonia die suddenly. In some this sudden death seems to be due to interference with respiration. The patients are suddenly attacked with rapid and difficult breathing and die in from half an hour to a few hours. In these cases we often find after death congestion and œdema of the uninflamed portions of lung. Other cases seem to die from failure of the heart's action. In severe pneumonia the heart's action is often rapid and feeble, and it may at any time become so feeble that death takes place suddenly. But even in comparatively mild cases of the disease death may take place in the same way. The disease will run its ordinary course for several days, often for a week, then the heart will suddenly begin to act very feebly, the skin becomes cold, the patient passes into a sort of collapse and dies, sometimes in a few minutes, sometimes after several hours. In rare cases death may take place during convalescence from thrombosis of the coronary arteries.

*Duration.*—The constitutional symptoms last until defervescence takes place — that is, from the second to the eighteenth day. Resolution follows at any time from two to twenty days later. The fatal cases may die at any time from five hours to three weeks after the initial chill. In New York most of the adults die on the seventh, eighth, and tenth days; most of the persons over seventy on the fifth, sixth, and seventh days.

*Prognosis.*—The prognosis depends on the extent of lung involved in the inflammatory process; on the existence of complications; on the age of the patient (persons over seventy years of age seldom recover); on the social condition of the patient. Labourers and mechanics are more apt to recover than professional and business men. The prognosis is always much worse in patients addicted to the use of alcohol.

*Treatment.*—The treatment of lobar pneumonia calls for the exercise of much knowledge and judgment on the part of the physician. It is necessary to be practically acquainted with the course of the disease, and to appreciate fully the exact condition of each patient. There is no routine treatment for pneumonia; each case must be managed on its own merits. If we see a patient during the first twelve hours of a pneumonia the question presents itself as to whether we shall try to abort the disease. This may be done in two ways: by general bloodletting, or by large doses of calomel. The latter plan is the one more frequently employed in New York. From twelve to twenty grains of calomel are placed on the patient's tongue, and this dose may be repeated in six hours. In favourable cases either the bloodletting or the calomel may cause defervescence to take place within a few hours. But both these plans fail in more cases than they succeed. Ordinarily no such attempt is made to abort the disease. Our first care is to put the patient into a condition of absolute rest. He is to be kept in bed, fed on fluid food, and given opium in small doses. Everything which can annoy or irritate the patient is to be strictly avoided. If the temperature runs between 100° and 104° it requires no treatment. If it rises higher than this we may sponge the skin with alcohol and water, give diapho-

retics, and aconite or veratrum viride in small doses. Large doses of quinine, cold baths, and cold affusions not only make no permanent reduction in the temperature, but they are positively dangerous. The pulse should regularly be between 100 and 120. If it is above 120 and feeble, we should endeavour to render the heart's action slower and stronger. The most efficient agent for this purpose is alcohol. Either wines, whisky, or brandy can be prescribed. The amount of alcohol used is to be regulated by its effect on the pulse. It is often well to combine with it either opium or the liquid extract of convallaria. This seems to be the only indication for the use of alcohol in lobar pneumonia. Unless it is required as a cardiac stimulant, the patient is better without it. If the breathing is not only rapid but oppressed at the onset of the disease, the patient may often be relieved by the use of wet cups, dry cups, warm fomentations, or mustard plasters over the whole of the chest. If such oppression continues through the disease, it may be mitigated by the use of calomel and opium in small doses, by aconite and veratrum viride, and by diaphoretics. For the pain in the side, the restlessness, and the sleeplessness, the most efficient remedy is opium, selecting the preparation and the dose to suit each patient.

From what has been said, you will infer that many cases of pneumonia require no treatment but rest and opium; and this is true. If the disease is running a mild and regular course, you are not likely to improve matters by interference. The only indications for treatment are to relieve an abnormal development of any of the symptoms which may threaten to disturb the patient.

## THE TREATMENT OF POST-PARTUM HÆMORRHAGE.

BY ROBERT BARNES, M.D.

THE very instructive communication of Mr. Coates on "Two Cases of Intra-venous Injections of Fluids for Severe Hæmorrhage" cannot fail to arrest the attention of the profession. In my "Obstetric Operations" I have taken especial care to dwell upon this method of restoration, basing greatly upon Dr. Little's treatment of cholera by this method and upon his subsequent experience. The late Dr. Woodman found the blood-globules in a patient who had undergone saline injection unaltered. Mr. Coates now adds the extremely valuable fact that the injection of plain water also has no deleterious effect upon the blood-globules. This experiment then amply proves a proposition laid down in my "Obstetric Operations"—namely, that an argument in favour of saline fluids lies in the fact that "the drained circulatory system labours not alone under the loss of the vivifying element, but also under the purely mechanical difficulty of vacuity. The heart and arteries have nothing to contract upon. Now, the simple injection of ten or twelve ounces of fluid restores, to a certain extent, the dynamic condition of the circulation." That this should be effected by the simple injection of "twenty-two ounces of warm water," as practised by Mr. Coates, is one of the most interesting physiological and clinical demonstrations with which I am acquainted. Yet I think saline solution is preferable, and a mixture of saline and defibrinated blood recommended in my book would be better still. This method of saline injections has the incontestable advantages of being always available at short notice, of avoiding risk of failure from coagulation, of enabling us to use simple forms of apparatus, and of being in other ways a more simple proceeding." Almost any syringe will do; but it is important to have a good cannula, such a one as is fitted to Aveling's apparatus. This should be carried in the obstetric bag.

I wish to add a word or two of comment upon the use of ferric chloride to arrest hæmorrhage. Mr. Coates used it in both cases successfully. In the first case "manipulation, hypodermic injection of sclerotic acid, cold affusions, ice internally and externally, the intra-uterine injection of hot water, were all resorted to; but these measures failing to produce more than temporary contraction, ten ounces of a solution of perchloride of iron (one in five) were injected into the uterus. The hæmorrhage ceased." Here is evidence in support of the proposition I have so much insisted upon, that when the diastaltic function is suspended, persistence in remedies which act through that function is useless, and may be injurious. All the means enumerated above are of this class, excepting the last, the ferric chloride, which may still act by virtue of its local styptic corrugating power when all other means have failed. The other case gives similar testimony; but Mr. Coates gives expression to a suspicion that an attack of secondary hæmorrhage in the subject of it might be due to the separation of a slough formed after the use of the iron injection, and says he fails to find this danger "alluded to in the ordinary text-books." I am quite aware that the ordinary text-books are very defective in instruction as to the principles upon which uterine hæmorrhage should be controlled; but in the "Obstetric Operations" the consequences of using caustic ferric chloride are discussed, and the necessary cautions are described. Two instances of the caustic action of iron are referred to. Neither of these was followed by secondary hæmorrhage, and Dr. Lombe Atthill is cited as having "used the solid perchloride successfully." At present, then, the weight of evidence is against the supposition that strong iron solutions may cause secondary hæmorrhage by sloughing. Nevertheless, I wish to repeat that it is not necessary to use caustic solutions. The case is one for styptics. The distinction between caustic and styptic iron solutions is clear. The styptic solution should, however, be strongly styptic. One in ten may be strong enough, but I prefer one in eight.

The first thing to do is to take care that the uterus is free from blood or clots. To ensure this a stream of hot water should first be sent through. This is a last appeal to the diastaltic force. If it check the hæmorrhage, the iron will not be used. But often it will fail; then the iron comes to the rescue as the last resource. About eight ounces should be injected through slowly and gently. I have well weighed the advantage of swabbing, and prefer the method by injecting. With those who see no danger in hæmorrhage, or who urge that it can always be checked by "ordinary means," it is useless to reason. Nor can the dictum that the remedy is worse than the disease command respect. Hæmorrhage kills if not checked. It has often killed when the "ordinary means" have failed. One might as logically contend that to use the forceps is worse than to let a woman die undelivered, heedless of the *medio tutissimus*—that is, obstetrically interpreted, "axis traction," — because in unskilful hands the forceps may tear through the recto-vaginal septum, or rend the bladder.

Harley-street.

## LATERAL CURVATURE OF THE SPINE.

BY E. NOBLE SMITH, F.R.C.S. ED.,
SENIOR SURGEON AND SURGEON TO THE ORTHOPÆDIC DEPARTMENT OF THE FARRINGDON DISPENSARY.

(*Concluded from p. 91.*)

*Causes of Lateral Curvature.*—These may be divided into *predisposing* and *exciting* causes. The exciting causes may give rise to the affection when the predisposing causes do not exist, and the predisposing, if severe, will allow the formation of curvature although the exciting causes are so slight that they are scarcely if at all distinguishable, or possibly do not occur. The *predisposing* causes are probably all circumstances which give rise to debility. This debility may act generally, or it may affect the dorsal muscles, and disenable them to retain the spine in an upright position for long periods. The condition of the bones may predispose to the formation of curves. In rickets, the vertebræ, if affected, readily give way to lateral pressure. In general debility, and especially when the scrofulous diathesis is present, the bones are more readily influenced than they are in health. If a child grows rapidly curves are sooner formed than when growth is slow. With regard to the general health, I may add that all habits and circumstances which depress the bodily health may act as predisposing causes, and especially those in which the muscles of the back are overtaxed, or in which their development is retarded. We all know how much more frequently girls suffer than boys from lateral curvature, and it is very common to find some retardation of sexual development or some derangement of the commencing menstruation. The natural delicacy of formation

of girls may possibly be one reason for their greater liability to the affection; but their sedentary occupations obliging them to try to rest their backs, by allowing the spine to subside laterally, is probably a more potent cause. If the back is not rested directly the muscles become tired, the spine subsides to one or other side, and is supported in that position chiefly by the articular processes. The frequent pressure in one direction (for the subsidence generally takes place repeatedly upon the same side) soon causes inequality of growth and alters the position of the soft growing spine; and a slight curve once commenced is very easily increased. Much standing, and the use of forms and straight-backed chairs, have a great influence in producing lateral curvature in this manner. We know how much the poor suffer from these influences; and lateral curvature of the spine occurs more frequently among the working classes than is generally stated. Among the rich the spines of young girls are equally or more severely overtaxed. With the object of making girls "refined in their manners," an unnatural restraint is placed upon their movements, and they are not allowed to follow the dictates of nature, which would lead them to take a sufficient amount of exercise in an unconstrained manner to ensure the maintenance of their health and form. Children require recreation, not merely exercise. Young people are not benefited by long stately walks; they require freedom, ease, and play; and when they are deprived of such occupation, the health always suffers and the spine frequently becomes deformed.

*Exciting causes.*—Conditions which disturb mechanically the equilibrium of the spinal column continuously or for long periods act as exciting causes. The chief of these I will now enumerate:—1. Inequality in length of the lower extremities, causing obliquity of the pelvis. 2. Inequality of weight of the two sides of the body, as, for instance, when an arm has been lost. 3. Disease or injury, producing contraction of one side of the thorax or abdomen. 4. Alteration in the position of the head—wryneck, for instance. 5. Bad habits of position, sometimes the result of the predisposing causes.

The following are some of these bad habits of position—1. Standing frequently upon one leg. 2. Bending the body for writing, &c., at a low table. 3. Bad positions at other work. 4. Carrying heavy weights always upon one side. 5. Standing at school or sitting upon stools or forms without backs, or with unsuitable backs.

*Treatment.*—In the first place the causes must be removed if possible. A short leg, for instance, must be raised to its proper height. The general health must be treated, and this is a very important matter. The special means of treatment to be considered are—1. Local stimulants. 2. Rest. 3. Mechanical extension and pressure. 4. Muscular exercises. 5. Mechanical support and pressure.

1. *Stimulating liniments* used to the back are applicable in the majority of cases when there is loss of muscular tone.

2. *Rest.*—When no instrument is used the patient should rest in a chair which fits into the natural lumbar curve of the back, or in the prone position upon a couch. The latter plan prevents the subsidence of the spine and the formation of round shoulders, and tends to bring the dorsal muscles into play beneficially.

3. *Mechanical extension and pressure.*—I will not attempt to describe the various machines which have been devised for extending the spine and at the same time forcing in the curves. The result of such treatment has seldom if ever been satisfactory, and some of the apparatus which have been used may justly be called barbarous.

4. *Muscular exercises* are employed for two purposes: (1) To strengthen weak muscles; (2) to act directly upon the curves. The former, which are highly beneficial in suitable cases, I need not describe, but the latter demand further attention.

The exercises which have hitherto been recommended for acting directly upon the curves have been devised with the object of drawing out the concave side of the curve, by employing the arm of that side, the patient exercising upon a trapeze with that arm higher than the other. Now, the muscles which extend from the arm to the spine in the concavity of a dorsal curve are the trapezius, the rhomboidei, and the upper part of the latissimus dorsi, and these are attached to the spinous processes of the vertebræ. We have already seen that the spinous processes are directed, in consequence of rotation of the vertebræ, towards the side of the concavity, and that the rotation is the most important part of the distortion, and the part which may produce the chief amount of deformity. The effect of this exercise is obviously to draw the spinous processes further in the direction of the concavity, and consequently increase the rotation of the vertebræ. The arrow proceeding from the spinous process in Fig. 7 will show the direction in which the muscles already

FIG. 7.

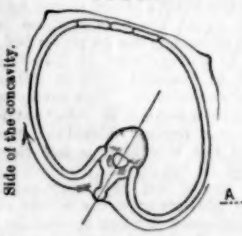
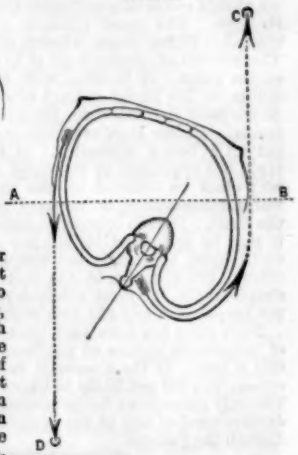



FIG. 8.




referred to will act, for it must be observed that although both arms are to be used in the exercise, yet the muscles which attach the arm to the spine upon the side of the concavity are brought into greater action than are the same muscles upon the opposite side. The position of the body necessitated by this exercise would be a good one if it were not brought about by the action of the muscles enumerated above.

The plan of special exercises which I have devised for cases in which there is much rotation consists in the use, upon the convex side of the curve, of the muscles above referred to, with the object of drawing the vertebræ round towards their proper position; and upon the concave side of the curve the patient has to exercise the muscles which extend from the arm to the front of the body, with the object of drawing backwards that prominent side of the thorax. The arrows in Fig. 8 show the direction of the force used. A weight is raised towards the pulley, C, by the patient drawing a cord towards the body with the right hand (presuming there is a dorsal curve to the right), and the left arm is worked in the opposite direction, as indicated in the figure. The pelvis must be fixed in a suitable chair during these exercises. Although this plan of exercise acts directly only upon the dorsal curve, yet the resistance of the pelvis to the action of the arms tends to twist the lumbar part of the spine in the opposite direction, and thus produces the exact action that is wanted. If more direct action is required for a lumbar curve, the quadratus lumborum may be brought into use upon the convex side of the curve. The *rationale* of this system is to shorten the curves upon their convexities and to rotate the vertebræ back to their normal position. Slight variations in these exercises must be made to suit the peculiarities of individual cases, and general exercise of the erector spinæ muscles of both sides should always be carried out in addition to the special exercises now described.

5. *Mechanical support and pressure.*—If improvement does not soon take place as a result of the plan of treatment already described, recourse should be had to some mechanical appliance, which, however, should be as light and simple as possible, and which should *not interfere with due use of the muscles* during ordinary occupations. The mechanical instrument should always be adapted by the surgeon himself. Moreover, the construction of so important an apparatus ought not to be left entirely to the instrument maker; the special knowledge of a medical man is required to fully understand the nature of the deformity, and to properly determine the places where and the manner in which any pressure or support is necessary or justifiable.

I have elsewhere described fully the necessary mechanical treatment of these cases, but I may observe here that the spinal instrument should *not* interfere with the use of the muscles of the back, but should act chiefly as a support ready to rest the spine in an upright position directly the muscles are unable, from fatigue, to keep the column upright. By such means the spine is prevented from subsiding into a position of lateral curvature, and time is gained during which the muscles may be strengthened, and the general health of the patient improved. If the instrument is con-

structed upon these principles none of the objections which have been so often justly raised against mechanical treatment can be applied to it, and we shall be enabled by its help to treat our patients much more effectually and rapidly than if we depended upon non-mechanical treatment by itself.

Queen Anne-street, W.

# ON BEDSIDE URINARY TESTS.

BY GEO. OLIVER, M.D. LOND., M.R.C.P. LOND.

ALL busy practitioners must admit the clinical utility and importance of accurate, time-saving, and portable tests, by which they may, during their rounds, decide with precision and certainty, and on the spot, pathological conditions of the urine, or satisfy themselves, and their patients, if need be, without delay as to the soundness of that excretion. From the numerous contributions on portable urinary tests which have recently appeared in these pages, it is clear that practical men, who have long realised the serious inconvenience of carrying about caustic fluids for testing at the bedside,[1] are anxiously feeling their way to more manageable and handy yet equally trustworthy reagents, and I take it the profession at large is prepared to accept any useful suggestions towards this end. Hence the articles of Dr. Roberts on Acidulated Brine,[2] of Mr. Stephen on the Volumetric Estimation of Albumen,[3] of Dr. G. Johnson on Picric Acid, and of Dr. Pavy. The corrosiveness of nitric acid and the causticity and instability of Fehling's solution, rather than want of faith in the trustworthiness of these tests, have doubtless mainly prompted the suggestion of more portable reagents. In the substitutes we therefore seek for compactness, handiness, and portability, without the sacrifice of the generally admitted reliability of the old forms for clinical purposes. Doubtless others besides myself have been trying to supply this desideratum, and may be prepared to offer useful hints. Having, however, attained to certain results which have satisfied my own clinical needs, I feel I should not delay further in communicating them to those of my professional brethren whom they may interest; and I do so with the hope that they may prove useful, especially in the saving of time to busy men, and may facilitate urinary investigation at the bedside. My experiments have embraced the qualitative and quantitative testing of albumen, sugar, and total acidity. I should make the preliminary statement that I have succeeded in all my reagents in abolishing the fluid state, and likewise the solid form, either of powder, crystal, or pellet. It occurred to me some time ago that evaporation of the test fluids I was then using on chemically inert filtering-paper, linen, or other similar fabric, would secure the deposition of the reagents in a finely divided and concentrated state, a condition it was hoped favourable to such a rapid re-solution of them in the urine as to produce a quick and sensitive action on the constituents sought for. I soon discovered that my pieces of chemically charged paper were, when dropped into a small quantity of the urine in a test tube, very delicate and cleanly tests; and being in the most portable and compact of all forms for clinical work, and, moreover, affording better results than I had previously obtained from the old corrosive test solutions, it was not long before I cleared my spoilt urinary case of the latter; and I can assure my readers I did so with a feeling of satisfaction and comfort. Then, inasmuch as it was an easy matter to graduate the papers with standard solutions of the reagents, I next proceeded to inquire how far this simple process could be carried in determining the quantities of albumen, sugar, and total acidity; in other words, I thus attempted to apply at the bedside the volumetric method of analysis in the form of pieces of filtering paper charged with definite quantities of the reagents with a quantitative colour limitation on paper from which the percentage of the constituent sought for could be at once read of. Up to the present I am satisfied in having attained rapid and, for all practical purposes, sufficiently accurate results. I intend shortly, as a matter of curiosity, to scrutinise the figures indicated by my paper method for the estimation of albumen by the side of the burette with its standard solution; and I hope on some future occasion to be able to state definitely how near I can approach quickly at the bedside the results which can only proceed from the laboratory with its attendant delay. I must content myself in the present communication with my notes on—

## THE QUALITATIVE ESTIMATION OF ALBUMEN.

When picric acid was brought forward by Dr. G. Johnson as a remarkably delicate test for albumen, it occurred to me as likely to assist in deciding the sensitiveness of the various albumen tests from clinical evidence rather than from the laboratory, to take a series of urines containing very small proportions of albumen, to subject them to all the best-known tests, and to carefully tabulate the results. Since then I have met with twenty urines, among others, which supplied the required condition, all being faintly impregnated with albumen presumably derived from the presence of a small quantity of pus, or of blood, or of both, as determined by the microscope.[4] The table of results annotated at the time of every testing is before me. All the urines were acid except one, which was alkaline. The reagents employed were the following:—

1. Strong nitric acid.
2. Boiling the sufficiently acid urine and afterwards adding dilute nitric acid.
3. Saturated solution of potassium ferrocyanide, and the urine freely acidulated by citric acid, as suggested by Dr. Pavy.[5]
4. Saturated solution of picric acid as advised by Dr. George Johnson.
5. Acidulated brine after Dr. Wm. Roberts.
6. Standard solution of potassio-mercuric iodide, after Tauret, and recently brought to notice by Mr. Stephen, with this modification—strongly acidifying the urine with citric acid instead of acetic.

The test fluid and the urine were in all the experiments brought into contact, as in Heller's method of using strong nitric acid, and the line of juncture was carefully examined for at least five minutes. Out of the twenty urines strong nitric acid failed to indicate the presence of albumen in sixteen instances, boiling in fourteen, acidulated brine in fourteen, and potassium ferrocyanide in twelve; while picric acid and potassio-mercuric iodide gave a distinct and generally a sharply defined ring of precipitated albumen in every case. The reaction was indicated by varying degrees of rapidity by the different tests; I must name the potassio-mercuric iodide and picric acid as the readiest; and of the two I would, if pressed for a preference, decide in favour of the former. I found as a rule strong nitric acid, acidulated brine, and potassium ferrocyanide much slower whilst bringing to light mere traces of albumen. I should here remark that I do not attach much clinical importance, so far as I can see at present,[6] to the ability which the most sensitive of these tests possess in the detection of albumen in minimal proportions; for if I did not do so it might be justly thought by the practical physician that such observations as these indicate an ultra-refinement in testing of no utility in daily work. They were simply made for the definite purpose of affording data suggestive of the most thorough of all the best tests for the discovery of albumen in urine; and as such they undoubtedly point to the potassio-mercuric iodide and picric acid; and to potassium ferrocyanide and acidulated brine as next in order. I should remark that, with regard to potassium ferrocyanide, I am not quite satisfied that the method (Heller's) followed throughout these observations for the sake of uniformity in obtaining the comparative results, fairly put to the trial the capacity of this test as an albumen precipitant, for on several occasions I noticed the production of a very slight opacity all through the urine instead of a well-defined ring. I am, therefore, with this qualification in my mind, inclined to think somewhat better of it than the above-recorded number of failures might lead anyone to suppose. The outcome of these observations, as well as of more recent ones, suggests to me the grouping of the tests in the following rising order of power to detect small quantities of albumen:—1. Strong nitric acid and boiling. 2. Potassium

[1] Hence the fact of many medical men having given up urine testing entirely during their rounds.

[2] THE LANCET, vol. ii., 1882, p. 613.

[3] Ibid., vol. ii., 1882, p. 614.

[4] Whenever albumen was detected by any of the reagents mentioned in this paper, the urinary deposit was subjected to microscopical examination, and the impregnation was indicated, or at least suggested, by the presence of blood, pus, or casts.

[5] See THE LANCET, vol. ii., 1882, p. 832.

[6] Since writing the above, observations have, however, caused me to modify my first-formed impressions as to the clinical value of the keenest albumen precipitants as at present known.

ferrocyanide and acidulated brine. 3. Picric acid, potassio-mercuric iodide, and the two new tests brought forward in this paper. I have, as a rule, found the members of each group to be nearly equivalent, and confirmatory of each other; and, further, the albumen which strong nitric acid and boiling discovered was always detected with greater facility by all the other reagents, and those tests which comprise the third group frequently revealed traces which the others failed to bring to light; lastly, potassium ferrocyanide and acidulated brine certainly took precedence over strong nitric acid and boiling. As confirmatory of the foregoing observations I may mention that I lately supplied an analytical chemist with some strongly albuminous urine, and he subjected it in the following way to a comparative examination by strong nitric acid and the tests I am introducing in the paper form. After diluting the urine until the albumen was just detectable by the acid, he proceeded to further dilution, when the reaction failed to appear, though still the more delicate paper tests distinctly indicated the presence of the albumen. The albumen precipitants which I find work well as test papers are: potassio-mercuric iodide, potassium ferrocyanide, the two new tests, and picric acid.

1. *Potassio-mercuric iodide* was introduced by Mr. Guy Neville Stephen to the readers of this journal[7] as an albumen precipitant discovered by Tauret of Troyes. I select it for production as a test paper because I formed a favourable opinion of it while working it side by side with the other tests, and because it enables one to readily determine the quantities of albumen at the bedside. I moreover found that this double halloid mercuric salt could be evaporated to dryness on filtering paper without impairing its albumen-precipitating power; and the charge thus communicated still retains its integrity, though introduced over six weeks ago. Each paper contains one-fifth of a cubic centimetre of a standard solution, the formula for the preparation of which I hope to give in an article "On the Quantitative Estimation of Albumen at the Bedside," after my return from a holiday abroad. In the mean time I should say it differs considerably from that given in Mr. Stephen's paper. Hitherto, whenever the presence of albumen was indicated by this test paper, corroboration was furnished by picric acid, and the other tests of kindred power; and when the amount of albumen was such as to bring it within the range of less sensitive reagents, these also afforded confirmation. This mercuric salt is said to cause a quasi-albuminous precipitate in the urine of patients taking alkaloids; but I am not yet convinced of the correctness of this assertion, which I must leave, from want of conclusive evidence, neither positively confirmed nor denied. To this test I have repeatedly subjected the urine of one patient taking six grains of extract of opium every night and two grains of codeia twice a day, of another having two daily subcutaneous injections of morphia and atropia, and of another taking fifteen grains of salicine three times a day with this result: a very faint cloud on adding the paper and a delicate ring by the "contact" method of testing; but the same reactions followed the use of picric acid, and the microscope revealed the presence of pus cells. After giving up the salicine, the urine still gave the same faint indications of albumen in small quantity. But should this source of error exist, it is not likely to induce more than a semblance to the merest traces of albumen, and it is, moreover, easy to guard against it. Then, again, should a patient be taking an alkaloid, this series of test papers provides other equally sensitive albumen precipitants.

*(To be concluded.)*

[7] Op. cit.

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A MEETING of the governors of the Cotton District's Convalescent Fund was held at Manchester on the 22nd inst., the Earl of Sefton presiding. The architect's report showed that the new hospital at Southport was making satisfactory progress, and arrangements were made for connecting the new with the existing hospital. It was resolved to continue the granting of beds without charge to patients until otherwise ordered by the governors.

THE outbreak of scarlatina in Belfast has lessened considerably, and last week the number in the Union Hospital was down to fifty-three, twenty-five convalescents having been discharged during that period.

## CASES OF NASAL POLYPUS PROJECTING INTO THE NASO-PHARYNX; WITH REMARKS.

BY E. CRESSWELL BABER, M.B. LOND.,
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THE following cases present several points of interest both as regards diagnosis and treatment.

CASE 1. *Aural Polypi on both Sides; Removal. Right Nostril: Small Polypus removed from the Front with Forceps. Left Nostril: Much narrowed, preventing view from the Front, but Polypus seen projecting into the Naso-Pharynx by Posterior Rhinoscopy; Removal with Cold Wire Snare.*—E. S——, female, aged thirty-two, was admitted a patient at the Throat and Ear Dispensary on May 30th, 1879, suffering from deafness, vertigo, and discharge from the ears. She had all her life been subject to an offensive discharge from the nose, with hard pieces coming away. Both auditory canals were occluded by large polypi. These were removed in the usual manner, leaving perforations in the tympanic membranes, and intermittent purulent discharge from the tympana. After treatment of the ears, attention was directed to the nasal cavities, and a small polypus was seen by *anterior* rhinoscopy in the right nostril. On July 30th it was removed by the somewhat unscientific method of avulsion with forceps, a proceeding which, by the way, I do not recommend. A polypus was also seen in the left nostril by *anterior* rhinoscopy, but owing to extreme narrowness of the nasal cavity on that side attempts to remove it were unsuccessful, only a piece being removed with the snare on Sept. 21st. On Nov. 28th by *posterior* rhinoscopy, with reflected sunlight, a glimpse of a polypus projecting through the left choana was obtained, and it could also be felt by palpation. The patient was ordered insufflations of tannin, and remained away a few weeks, being readmitted on Jan. 19th, 1880. Careful examination then showed a polypus of considerable size nearly filling the left choana, and projecting into the naso-pharynx. Voltolini's palate-hook was employed, but produced so much irritation that it could not be borne. The left nostril was so narrowed by deflection of the septum that the polypus could not be seen from the front, although a soft mass was felt with the probe, from which two small portions were removed with the cold wire snare. On Jan. 28th the polypus was removed in the following manner. The author's self-retaining nasal speculum[1] having been adjusted to the left nostril, a large loop of steel wire attached to an ordinary nasal polypus snare was introduced through the anterior nares along the side of the septum until it reached the posterior pharyngeal wall. By means of the left forefinger inserted in the naso-pharynx, the loop of wire (which expanded by its own elasticity) was then pushed round the growth. The wires were tightened by an assistant until the point of the instrument almost touched the polypus, and the growth was then easily cut off by drawing the loop home. Owing to its size, however, the polypus could not escape through the nostril, but had to be pushed back into the naso-pharynx with a probe, being then ejected through the mouth. The day following, both superior and middle turbinated bones on the left side could be plainly seen on posterior rhinoscopy, but no sign of the polypus was visible. The left nostril was so clear that when the patient was discharged, five days after the operation, the movement of the palatal muscles on deglutition on the left side could be seen by *anterior* rhinoscopy, which affords, I find, a fair test of the permeability of the lower part of the nasal cavity. Ten months later, examination showed no return of the growth.

CASE 2. *Nasal Polypus on left Side projecting into Naso-Pharynx; Removed with Cold Wire Snare. Right Nostril: Small Polypus removed from Front of Middle Turbinal. Also small Erectile Growth on Right Side of Septum, near Posterior Nares, removed with Snare. Use of Voltolini's Palate-hook.*—This case is very similar to the preceding. E. Y——, nurse, aged forty-eight, was admitted to the Dispensary on April 3rd, 1880, with the following history:—

[1] Dr. A. Hartmann, referring to this instrument (Archives of Otology, March, 1882, p. 85), says that with it it is impossible to press the tip of the nose upwards. He cannot have tried it, or would find that, by applying the band *obliquely* in the manner figured in the British Medical Journal, the tip of the nose is easily raised by means of the double-curved hook.

Last September she first noticed an irritation in the left side of the nose, since which the left nostril has been stopped up and has discharged. She also has a feeling of something falling down her throat from the nose, especially at night. It keeps her awake, and produces great dryness of the throat. Since her nose has been affected she has also suffered from palpitation of the heart. On being asked, she denied that she suffered from asthma, but it appeared subsequently that she suffered from a feeling of tightness in the chest, produced by the polypus. An examination of the nose on the ensuing days revealed the following state of parts: By anterior rhinoscopy the upper part of the left nostril was seen occupied by a polypous mass. Posterior rhinoscopy was extremely difficult on account of close proximity of the velum to the posterior pharyngeal wall. It was just possible, however, to see the upper part of a polypus in the left choana. (Voltolini's hook produced too much irritation to allow of its being employed.) On palpation a firm round swelling could be felt hanging down into the naso-pharynx in that situation. On April 10th this polypus was removed in precisely similar manner to that in the preceding case, the self-retaining speculum being employed, and the tumour being, as before, expelled through the mouth. Powdered tannin was ordered to be blown into the nostril, and six days after the operation the left nasal cavity was so clear that the movements of the palatal muscles on deglutition could be discerned through the anterior nares. On the day following this (April 17th) the left superior turbinated bone and Eustachian orifice could be seen with the rhinoscopic mirror. At that date also the small polypus attached to the upper part of the left middle turbinal was removed with the cold wire snare from the front. A slight attack of catarrh of the left tympanum then occurred, after which she was discharged. In the following June the patient was again seen, and complained of much discharge from, and soreness in, the left nostril. Various remedies were employed to relieve this—viz., the application of the flat burner of the galvano-cautery to the nasal mucous membrane; syringing with solution of lead through the anterior nares; spray of sulphate of zinc (which, as usual, caused temporary loss of smell and taste), &c. Solutions of perchloride of iron and nitrate of silver were also applied to the naso-pharynx, where it was thought that the root of the polypus could be seen and felt. These were all of little or no avail in arresting the discharge; but great benefit was derived from the use of a spray of equal parts of rectified spirit and water through the anterior nasal orifice. Although the left nostril was thus progressing favourably, and was apparently quite pervious, the patient still complained that she was unable to breathe through the nose at night when lying down. Anxious not to dismiss the case in this state, I again tried Voltolini's palate-hook, and by means of it was able to obtain a very good view of the posterior nares. On the left side the nostril was pervious; there was no sign of the polypus and the Eustachian orifice was visible. On the right side, attached to the septum nasi and projecting into the nostril, was a small rounded swelling of about the size and shape of a split pea. The phenomenon that on assuming the recumbent position for a few minutes the right side of the nose became obstructed while the left remained pervious could therefore be explained by the little growth, which was probably to a certain extent erectile, becoming swollen and occluding the nostril. It could not be felt with the finger in the naso-pharynx, being apparently just inside the nostril. After the patient had been lying down a few minutes it was removed, on August 2nd, with the cold wire snare, through the anterior nasal orifice, with the left forefinger in the naso-pharynx. There was considerable hæmorrhage afterwards. Four days later she reported that the right nostril was much freer, and that she could sleep with her mouth shut, with consequent relief to the previous dryness of the throat. The complete removal of the little growth was confirmed by the rhinoscope. Three weeks later this good result continued, and both nostrils appeared quite free. It may be noted that at this date the application of the palate-hook was less well borne than three weeks previously.

Quite recently (April, 1882) this patient has come under treatment again, complaining of discharge from and irritation in the left nostril, due to a small gelatinous swelling near the front part of the left middle turbinal, which was relieved by snaring off a small piece, and by the application of the galvanic cautery. Palpation (May 3rd, 1882) showed no trace of the polypus in the naso-pharynx.

CASE 3. *Large Nasal Polypus, projecting below the Soft Palate and arising from the Left Posterior Naris; Removal with Cold Wire Snare.*—More recently (Nov. 19th, 1881), I have had an opportunity of removing, with my friend Dr. Mackey, a similarly situated polypus. In this case (that of a young woman) the polypus hung down below the velum, and palpation showed that it arose from the left posterior naris. It was removed by a wire loop passed through the left nostril in precisely similar manner to the preceding ones, my self-retaining nasal speculum being employed as before. After removal the polypus measured nearly two inches in length, and about one inch from side to side, being flattened antero-posteriorly. It was attached by a narrow pedicle. A few days afterwards, when I saw the patient, the left nostril was pervious.

*Remarks.*—The interest of the first two cases centres in the hidden position of the polypi owing to the narrowing of the nasal passages. They indicate what is, of course, well-known to specialists—viz., the importance of a careful examination of the naso-pharynx in all cases of obstruction of the nostrils, without which these two patients would undoubtedly have gone unrelieved. For this purpose both palpation and posterior rhinoscopy stood me in good stead in these cases. In the first patient a good rhinoscopic view of the tumour could be obtained without Voltolini's palate-hook,[2] the application of which instrument produced too much irritation to allow of its being of any service. In Case 2 the hook was also very badly borne at first, but subsequently, after the naso-pharynx had been manipulated with the finger and repeatedly touched with astringent solutions, it was well borne, and was of considerable service in giving a view of the posterior nares, not only showing the clearness of the left naris (after removal of the polypus), but also the presence of the small vascular growth on the septum, causing obstruction of the right nostril. The conclusion, in fact, at which I have arrived from the use of the instrument in a considerable number of cases is the following. I have found that the application of the hook usually produces so much irritation that in ordinary cases where there is a fair space between the velum and the posterior pharyngeal wall, a better view can be obtained without it, and one quite sufficient for general purposes. Where it is of value is, I think, in cases such as the second one just described, in which the space between the velum and the posterior pharyngeal wall is so small ("Rachenenge") that without the hook no satisfactory view can be obtained. In these latter cases it is worth while to accustom the patient to the hook, in order that the soft palate may be drawn forwards and the parts thoroughly inspected. The concurrence in Case 1 of aural polypi in both ears, with nasal polypi on both sides, is interesting, and points, it would seem, to a constitutional tendency to the formation of local hyperplasias of the mucous membranes (to a "polypoid diathesis," if I may so term it). The polypi were not carefully examined, but were probably of the ordinary myxomatous or fibro-myxomatous character. The operative treatment was simple enough, and easily carried out, although in the last case, on account of the size of the polypus, there was rather more difficulty in adjusting the loop of wire around it.[3] Dr. Daly of Pittsburgh,[4] who has recently strongly recommended this method of operating in the naso-pharynx (i.e., by using one index-finger in that cavity as a guide), not only adjusts the wire snare by means of a finger in the naso-pharynx, but employs the galvanic cautery in a similar manner, withdrawing the finger of course before the electrode is heated. That some risk, however, attaches to the employment of the galvanic cautery near the Eustachian orifices by this plan is shown by the fact of ear complications ensuing after the application of the cautery in two of Daly's cases. Into the respective merits of the hot and cold snare and the forceps for the removal of nasal polypi I do not propose to enter

[2] This instrument is simply a strong steel retractor, of which the portion bent at right angles to the shaft measures about half an inch across and three-quarters of an inch in length. For full description of the same, and its mode of employment, see Voltolini's interesting work, "Die Rhinoskopie und Pharyngoskopie," 2nd edition, 1879.

[3] In this case a snare was employed, which has been made for me by Messrs. Wright and Co., of New Bond-street, and which I showed at the London International Congress (Sub-section of Laryngology). The wire is contained in a steel tube (measuring rather over nine centimetres in length and two millimetres and a half in diameter) and adjustable at any angle to the handle by means of a screw near the ring for the thumb. This snare is chiefly of advantage for the removal of growths from the front of the nostrils, as with reflected light it can easily be adjusted to any visible part of the interior of the nose. I have employed it in a considerable number of cases.

[4] Archives of Laryngology, vol. ii., No. 2.

on the present occasion. As regards after-treatment, it being impossible to reach the roots of these polypi directly, astringents had to be applied to the nasal mucous membrane generally. The good effect of alcohol for arresting the discharge after removal is seen in Case 2. In these cases it probably acts in the same beneficial manner as after the removal of polypi from the ear. I have also found a spray of alcohol of service in chronic nasal catarrh without polypi, and recommend a trial of it in suitable cases, beginning with a mixture of rectified spirits of wine one part and water three parts, and gradually increasing the strength.

Brighton.

# A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

## GUY'S HOSPITAL.

SARCOMA OF TEMPORAL BONE, COMPRESSING CEREBELLUM, AND CAUSING FACIAL PARALYSIS; DEATH.

(Under the care of Mr. BRYANT.)

FOR the following notes we are indebted to Mr. Brenton.

Augusta B——, aged ten years and a half, was admitted on July 20th, 1881, into Lydia ward. It was stated that when born she seemed healthy, but had not been so since she was vaccinated. She had had measles and whooping-cough, and disease of the knee-joint, for which her leg was amputated through the thigh. About six months before admission she complained of pain in the left clavicle, and extending up the neck. About the same time a swelling formed behind the ear, on the temporal bone. After the appearance of the swelling, she suffered from pain at the upper part of the nose, and passed several blood-clots.

On admission the child was delicate-looking; she had pediculi capitis, but neither syphilitic teeth, sores on the head, enlarged cervical glands, nor discharge from the ear. There was a hard, firm swelling, perfectly immovable behind the lobe of the left ear, and extending over the mastoid portion of the temporal bone, and the adjacent portion of the occipital. It was about $1\frac{3}{4}$ by $2\frac{1}{2}$ inches, and was not connected with the lobe of the ear. There was no pain in the swelling, but it was tender on pressure. The patient had throbbing pain in the occipital region. She had had no sickness, no dizziness, no pain on flexing or rotating the head, and was able to eat perfectly well. On July 24th she was seized with acute shooting pain in the occipital region, and pain down the right side of the head. She passed a bad night, constantly crying out, "Oh, my head." Her nose bled, and she vomited and afterwards became collapsed. Next day under an anæsthetic an incision was made cutting through the sterno-mastoid. Some pus was discovered and escaped, and three pieces of diseased bone from the mastoid process were removed.

On Aug. 8th symptoms of paralysis of the seventh nerve appeared. On the 19th the right clavicle was much swollen. Patient was unable to hear with her left ear.

On Sept. 6th the wound looked well. The patient complained of great pain over the mastoid process. Facial paralysis marked. Tongue thickly furred, and when protruded curved to the right. Her leg from time to time was painful. On the 24th the child was much wasted; left side of face quite flat; conjunctiva reddened and thickened where exposed. The paralysis was complete. The child had difficulty in opening her mouth, and could only protrude her tongue a short way; it went rather to the right side. Both sides were wrinkled and soft, so that there was no distinct evidence of paralysis of the ninth nerve. The pupil was normal; heard with the left ear; swallowed well. On the same day, under an anæsthetic, Mr. Golding-Bird commenced an exploratory operation. An incision was made diagonally into the swelling. Some pieces of necrosed bone were taken out, and some pus was met with and evacuated. The swelling was diagnosed as a periosteal sarcoma. On the 29th she could protrude her tongue further; could close her eye nearly completely; was quieter and less ill generally. Both sides of the tongue were equal, and the tongue went out straight.

On October 19th there was considerable pain at the back of the head and neck. Unable to protrude tongue as far as formerly. Pulse weak and rapid. On the 26th a small abscess in occiput broke. Three days later there was difficulty in swallowing. Pupils were much dilated. Breath was short and gasping. Temperature was regularly taken from September 10th to October 22nd; it was normal except on September 23rd, when the morning temperature was 102°, and the evening was 101·2°.—September 24th: Morning temperature 100·6°. From this time she got worse, and died at 3 P.M.

*Post-mortem.*—A sarcomatous growth was found filling the whole of the left post. fossa of the skull, and passing as a thin layer across the bacillar process. The left half of the cerebellum was much compressed and flattened across, as was also the medulla oblongata and nerves proceeding from it. The facial nerves were specially involved. The cerebral ventricles were much dilated owing to the exit of the fluid being hindered by pressure on the tumour. The kidneys and liver were the seat of lardaceous disease, and the lungs were a good deal congested.

## LEEDS INFIRMARY.

ACUTE PERICARDITIS WITH EFFUSION; PARACENTESIS PERICARDII; RECOVERY; REMARKS.

(Under the care of Dr. CLIFFORD ALLBUTT.)

FOR the following notes we are indebted to Mr. J. F. W. Silk, M.B., house-physician.

J. D——, aged twenty years, draper's assistant, was admitted on Dec. 23rd, 1881, and discharged well on May 18th, 1882. The following notes are abstracted verbatim from the clinical report of Dr. Barrs, then house-physician: No family history of rheumatism. He had rheumatic fever six or seven years ago, when he was laid up for five months. He was last at work on Dec. 19th. On the 20th he took to his bed on account of pains in the joints, especially the hip and knee. The onset was quite sudden on the morning of the 19th, but there was no rigor. He came to the hospital on Dec. 23rd, looking very ill and in obvious pain, saying he was suffering from acute rheumatism. When seen in bed he still complained of pain, but in an indefinite manner. He had scarcely the aspect of acute rheumatism; there was a want of helplessness, and the limbs were freely moved about. There had been no diarrhœa; no spots; joints all free from any physical change; tongue brown and dry in centre; heart sounds clear. Temperature 99° (after a warm bath). Ordered twenty grains of salicylate of soda every two hours.—25th: Morning temperature 103°; evening temperature 104°. Still taking salicylate every two hours, but troubled with vomiting.—28th: Temperature still running at a mean of 103°. Salicylate ordered to be stopped.

Jan. 1st, 1882: Slight diarrhœa yesterday. Complains of tenderness on pressure in both iliac fossæ. Copious eruption of sudamina. During last thirty hours has been taking twenty grains of salicylate of soda; there has been slight delirium in consequence. Temperature never fell, and salicylate is now stopped.—6th: Temperature 102°. Great dyspnœa this morning. Very distinct pleuritic rub at right base. General aspect bad and obscure. Mind clear. Taking opium (one grain every four hours) for relief of pain.—9th: Temperature 101·4°. Last night's temperature 105°. He was sponged with tepid water, and all the bed covering was removed. The temperature fell to 102° after thirty minutes' exposure. This morning there was great dyspnœa, and a general pleuritic rub over the whole of the right side of the chest. The general condition is not so good.—12th: Better. Respiration 48; pulse 84. The pleuritic rub has disappeared, so far as the anterior part of the right chest is concerned.—14th: Delirious throughout the night. This morning temperature 101°; pale; pupils dilated; mind clear. There is more dulness at the right base of an indefinite character, with very obscure auscultatory signs, except distinct pleuritic creaking. The abdomen is a little tender. Spleen not felt. Bowels acting; no diarrhœa. Respiration 40; pulse 80. Tongue moist. He is now taking

three or four pints of milk in twenty-four hours, with eight ounces of whisky.—17th: Temperature at 7.30 last night 104·5°; after sponging for twenty minutes it fell to 101·4°. Has passed a restless night. Had three grains of opium, but slept only two hours. Now lying on the left side. No change in the physical condition of the right chest.—23rd: There has been steady improvement during the last four or five days. This morning he is pale, and breathing rapidly; pupils not dilated. Not in any great pain, but a little discomfort in breathing. Heart: Cardiac dulness much increased. It begins at the third rib, and extends down to the sixth, and is much increased to the right of sternum (absolute dulness); apex not localised; distinct friction fremitus felt over the upper part of dulness. On auscultation friction sound distinctly heard over the upper half of the dulness, the systolic portion of which is double. Pulse 130; temperature 99°; evening temperature 100·6°.—29th: Cardiac dulness about same as on the 23rd. Friction sound unaltered at base. General condition about the same. Pulse 142; temperature 99°; evening temperature 101°.

Feb. 2nd: Pericardial effusion rather increased than otherwise. The præcordial region has a full distended look, there being a want of interspace markings. The absolute dulness begins now almost at the second rib and extends down to the seventh laterally; the dulness measures at the level of the fourth rib eight inches. Sounds obscure and distinct. No friction sound heard. Patient is pale and anxious. To-day, for the first time, a change in the abdomen is noticed. The epigastrium is full and tender, and dull on gentle percussion. Edge of liver is easily felt at about the level of umbilicus. Temperature 100°; pulse 128; evening temperature 101·6°.—4th: Patient better. Pulse, although rapid, is much steadier. Breathing 36, much freer. There is some slight improvement in physical signs. The cardiac dulness is not so great. Epigastric swelling and tenderness gone. Temperature 102°; pulse 152.—5th: Intense pain in back of chest during the night, with great dyspnœa. Sweating profusely. This morning he is better. Temperature 101°; pulse 142; respiration 52. The præcordial dulness is a little increased.—7th: General and local condition about the same. It is evident that he cannot hold out much longer if present condition continues. At 4.30 P.M. aspiration of the pericardium was performed by Mr. Ward, the house-surgeon, according to the plan followed by Dr. Clifford Allbutt and Mr. Wheelhouse in a similar case under the former's care about ten years ago. The fine aspirator needle was entered obliquely in the fourth left space, two inches and a half from the middle line, and pushed upwards and backwards towards the middle of the right scapula until a cavity was clearly entered at a depth of about an inch and a half. Only about an ounce of bloody turbid serum was drawn off (more could not be obtained). It was intended to withdraw as much fluid as possible. The patient struggled a good deal at first, but the operation did not really give rise to any special distress. Temperature 102°; evening temperature 101·8°; respiration 56.—8th: Passed a good night. Says he feels much better. Breathing still short (40). No marked change in cardiac physical signs.—9th: Temperature 99°; pulse 120; respiration 32.—10th: Temperature 100°; pulse 96; respiration 32.—11th: Much better. Temperature 100°; pulse 88; respiration 32. Area of cardiac dulness much less. Absolute dulness commences now at lower border of third costal cartilage, and extends downwards to sixth rib. It measures transversely at fourth cartilage (its widest part) six inches. Distinct cardiac impulse can now be seen and felt in fourth and fifth spaces. Sounds thumping and dull, but free from friction or bruit. General condition much improved. (The marked fall in pulse-rate may be due to digitalis, eighty drops of tincture per diem, which he has been taking since 5th inst. It is therefore discontinued.) He is now taking solid food, with eight ounces of whisky, and milk *ad libitum*. Evening temperature 102°.—12th: The cardiac dulness has fallen to nearly its natural size. The main increase is now to the right. Temperature 101·2°; pulse 120; respiration 32. He complains of pain in his back. There has been no difficulty in swallowing throughout. Lungs clear.—15th: Cardiac dulness continues well defined. Commences above at lower border of third cartilage and extends to sixth rib. Transversely it is limited by middle line and a point four inches to the left of this. Heart-sounds are of a thudding character. No friction or bruit. Base second sound is split. General condition improving. Temperature 99°; pulse 120; respiration 32. Pulse of no marked character.—22nd: Much better, but still pale and looking ill. No dyspnœa of importance. Cardiac dulness is still a little large and too easily defined. Temperature 99°; pulse 100; respiration 24.

March 8th: Allowed to get up for an hour. With the exception of a rather severe attack of vomiting, he continued to improve rapidly, and left the hospital on May 18th, 1882.

*Remarks.*—The drugs employed in the case were various, and given, with the exception of salicylate of soda, rather with the idea of combating the tendency to death than with any specific notion, and consequently have not been noted. It may be well to note that blistering was discarded. Among the many points of interest in the case, the following may be specially noted:—1. The rather doubtful rheumatic nature of the case at the commencement, and the failure of salicylate of soda to relieve. 2. The total absence of all joint affections, assuming it to have been a case of rheumatic fever. 3. A point so difficult to display in the notes, but so obvious to all who saw the case from day to day; the rapidly downward course of the case immediately prior to the aspiration, and the unaided part the operation played in saving life. 4. The comparatively rapid absorption of the effusion after the withdrawal of so small a portion of it.

## LIVERPOOL EYE AND EAR INFIRMARY.

A PIECE OF STEEL IN THE CRYSTALLINE LENS; ATTEMPTED REMOVAL; DEATH DURING THE ADMINISTRATION OF DICHLORIDE OF ETHIDENE.

WM. ——, aged twenty-six, a weakly-looking man, was admitted on the morning of Nov. 21st last, suffering from a wound of the right eye, inflicted with a chipping of steel, half an hour previously. On examination the foreign body could be seen in the lens. Mr. Edgar Browne decided that an attempt should be made to extract the body. The house-surgeon, Mr. Charles Shears, on auscultation of the patient could detect no cardiac murmur, but the sounds at the base were not distinct, and it was not thought sufficient to contra-indicate the administration of an anæsthetic. Dichloride of ethidene was then given on a small flannel inhaler, and the patient came under its influence slowly but quietly. In ten minutes the man was fully under the influence of the anæsthetic, and Mr. Browne made the corneal section. Almost immediately the pulse (which had been carefully noted all through) became very feeble, and the patient very pale. The head was lowered, the tongue drawn well forwards, and artificial respiration was commenced without delay. Air passed freely in and out of the chest. Nitrite of amyl was then applied to the nostrils, and the patient was inverted. He, however, showed no signs of returning consciousness. Artificial respiration was carried on for nearly half an hour, but without any beneficial result. Between three and four drachms of the ethidene were used.

By order of the coroner, a post-mortem examination was made thirty-six hours after death by Dr. Alexander Davidson, physician to, and lecturer on pathology at, the Liverpool Royal Infirmary. On removing the heart, it was found to be in a flabby condition, and the walls were very thin; all the valves were healthy. On the lining membrane of the aorta, one inch above the valves, and extending for some distance, small fatty patches were seen, as also on the thoracic aorta, and in one place there was the appearance as of a healed atheromatous ulcer. The heart muscle was examined microscopically, and found to have undergone extensive granular degeneration, the nuclei especially being surrounded with granules. The right lung was deeply congested.

At the inquest, evidence was given to the effect that the man died from cardiac syncope, produced by the administration of an anæsthetic to a patient whose heart was in a condition of commencing fatty degeneration, which condition could not have been discovered during life, and which certainly was not suspected in so young a man. The jury gave their verdict accordingly, adding that they thought "everything was done that could possibly be done, or that was customarily done." Since the early part of 1879 dichloride of ethidene has been largely used at the infirmary, it having been administered between four hundred and five hundred times, and, up to this present unfortunate occurrence, without any mishap. The absence of struggling,

with which patients come under its influence, its pleasant smell, and the very little sickness following its administration, caused ethidene to be regarded as a specially suitable anæsthetic for operations on the eye.

# Medical Societies.

## ROYAL MEDICAL & CHIRURGICAL SOCIETY.

*Cases of Polypoid Tumour of the Bladder removed by Operation.—Operation for Exploring the Bladder by Perineal Section of the Urethra, and for removing Vesical Tumour, Impacted Calculus, &c.*

THE ordinary meeting of this Society was held on the 23rd inst., John Marshall Esq., F.R.S., President, in the chair. The evening was occupied with the reading by Sir Henry Thompson of two papers, bearing on the operation for exploration of the bladder and removal of tumours from that viscus, and the prolonged discussion that ensued. A large collection of preparations was exhibited from the museums of the Royal College of Surgeons, St. George's Hospital, and University College Hospital, also specimens by Sir H. Thompson, including microscopical preparations by Mr. Boyd and Dr. H. Gibbes. At the close of the meeting Mr. Pearce Gould demonstrated Dr. Bigelow's latest modification of his instrument for litholapaxy.

Sir HENRY THOMPSON read a paper on four cases of Polypoid Tumour of the Bladder removed by Operation. The paper consists of the history of symptoms, the removal by operation, and the results, in four cases of vesical tumour, each of large size, one of them extremely so, and filling the bladder. In three the patients recovered, in the fourth, with the large tumour, the issue was fatal. A carefully made microscopical examination is described, and the report is appended in each case.

Sir HENRY THOMPSON also read a paper on an Operation for Exploring the Bladder by Perineal Section of the Urethra, and for removing Vesical Tumour, Impacted Calculus, &c.; with cases. The author desired to ask the attention of the Society to a new method of investigating obscure diseases of the bladder, which promises to be valuable in certain conditions occasionally met with. Everyone sometimes meets with a case in which the symptoms of vesical disease are severe and obstinate, and although very careful examination has been made, he is unable to arrive at a rational diagnosis. The occurrence is doubtless not a common one; in the great majority of cases carefully made observations demonstrate the nature and seat of the disease. But for the exceptional cases, always important—cases generally marked by frequent or persisting hæmaturia of some standing, manifestly not renal, and without local sign of cancerous tumour—he proposes to take decided action, and to submit, further, that such action should not be unduly postponed. The essential step in the method proposed is to examine the entire internal surface of the bladder with the finger, by which means we can recognise the presence of any tumour, large or small, the existence of encysted calculus, &c. The method of doing this was illustrated, and shown to be a proceeding simple and easy of performance, and at the same time one which involves little if any danger to life. It consists in making a small opening from the raphe of the perineum to the membranous urethra, which is opened on a grooved staff just enough to admit the left index-finger to enter the canal and to be pushed on to the neck of the bladder. Provided the anæsthesia of the patient is so complete that the abdominal muscles are perfectly relaxed, every portion of the internal surface of the bladder may be brought consecutively by suprapubic pressure into close contact with the tip of the finger, and any deviation from the natural condition, however slight, may be noted. The operation is an external urethrotomy only, and involves neither the prostrate nor the bladder. The application of the proceeding not only to diagnosis but subsequently to treatment, was then discussed. It was shown to offer facility for the removal of tumour, impacted calculus, &c. Seven or eight cases in which the operation had been performed were cited, and several examples of tumour were exhibited which had been removed by the author. These latter were examples of a disease which is inevitably fatal unless removed by operation; the signs and symptoms of their presence were discussed. Great care is necessary in examining the state of the patients before having recourse to operation. The two conditions, the absence of which are so important to be assured of before interfering, are: renal disease and cancer. Hæmaturia from either of these sources of course absolutely contra-indicates an operation.—The PRESIDENT, after alluding to the specimens and instruments exhibited, and in proposing a vote of thanks to the author, remarked that the subject opened up points on the diagnosis and nature of vesical tumours, and praised the paper for its clear and practical character.—Mr. LUND (Manchester) bore testimony to the practical value of the paper, treating of a class of cases difficult of diagnosis and treatment, which it could now be decided to deal with by external urethrotomy or median lithotomy in place of the more risky procedure of a lateral lithotomy or cystotomy. By this method Sir H. Thompson had shown that it was as easy to explore the male bladder as the female; and he would imagine that the main difficulty in the digital exploration would be in cases of fat subjects with deep perineums. He had seen cases in which the bladder had been opened for tumours by the lateral incision. Two of them were cases of malignant disease, but the third was one he had seen recently with Mr. Whitehead of Manchester, who, in a letter which Mr. Lund read, says that he first explored the bladder through an incision of the membranous urethra seven years ago, not deeming it a novel proceeding, and that within the past year he had performed the same operation six times; in four of the cases finding and removing growths from the bladder. In all of the cases the chief symptom was alarming and uncontrollable hæmaturia. The case seen with Mr. Lund was that of a medical man seventy years of age, who had suffered from persistent hæmorrhage for seven years, with frequent expulsion of villous shreds. The growth was scraped away with Volkmann's spoon, and the patient has resumed his practice without any further symptoms. In the second case there was much relief from pain and hæmorrhage, but death occurred three months after the operation from causes independent of the bladder. The third case was convalescent two months after the operation. The last case was much relieved, but had only been recently operated upon. Mr. Whitehead concludes that the operation is free from risk, that it affords in most cases ample facility for complete digital examination of the bladder; but that in very stout subjects partial exploration could only be effected, and that it was of great benefit even in cases of malignant disease, for it afforded good drainage and physiological rest to the bladder. Mr. Lund added that in cases where much hæmorrhage followed removal of a tumour, perchloride of iron could be injected, the vesical mucous membrane being very tolerant of strong astringents.—Mr. REGINALD HARRISON (Liverpool) related a case recently under his care at the Liverpool Infirmary. The man had long suffered from persistent hæmaturia, and on examination the prostate was thought to be enlarged and indurated. He cut down upon the prostate and found a hard fungating mass with a hard base, which he succeeded in enucleating. There was not much after-bleeding, and the hæmaturia has not since returned (now four or five months). Partial incontinence of urine followed, but was met by a "urinary truss"—i.e., an ordinary truss adjusted to the root of the penis. Mr. Paul, who examined the growth microscopically, reported that it was a specimen of scirrhous carcinoma.—Mr. DURHAM congratulated Sir H. Thompson upon his successful removal of tumours of the male bladder, but as regards the method described in the second paper he failed to see its novelty. He had performed it at least a hundred times in treating bladder disease, and could confirm Sir Henry's statement as to the ease with which the bladder could be explored by it. The operation was well known to Guy's men as Cock's operation, which was intended to afford relief to an inflamed bladder in cases of intractable stricture. In some cases he had found tumours, cancerous in nature, which he had partially removed. But Cock's operation was performed without the staff as a guide; the commencement of the prostatic urethra being determined by the left index finger in the rectum; and the urethra incised through the middle line of the perineum in front of this point. It was the same operation as Sir H. Thompson's with the exception of the use of the staff. In a case supposed to be one of impermeable stricture that he so dealt with, Mr. Durham found the obstruction to be due to an elon-

gated calculus impacted in the prostatic urethra, which he extracted through the wound. Such a case showed that the operation could be done as well without the staff as with it. It was also of the greatest value as a measure of relief in inflammatory or malignant disease of the bladder, affording drainage and a ready means of washing out the viscus. Hardly any risk was entailed by the operation itself, an operation which was as valuable in its way as tracheotomy. —Dr. H. WOTTON mentioned a case which occurred in his father's practice many years ago, where a calculus was impacted in the prostatic urethra. In that case great relief was obtained by raising the pelvis above the level of the head, thus keeping the urine from pressing on the neck of the bladder.—Mr. HENRY MORRIS had performed this median operation several times, and pointed out that in the class of cases for which Cock's operation was done, the urethra was so dilated at the point of incision that no harm was done if the median line were deviated from; but no one, he imagined, would prefer to cut down upon the urethra without a guide if one could be passed. During the past two years he had five times practised this method for exploratory purposes. The first was a case of encysted prostatic calculus, with much hæmorrhage; diagnosis was obscure, and recovery ensued. Two were cases of obstinate cystitis, both with great relief to the symptoms, although one succumbed to renal disease secondary to the cystitis nine weeks after the operation. A fourth case was that of an old man who had suffered from incontinence and constant pain for some time, and was admitted into the hospital in an exhausted state. Mr. Morris forthwith made the incision, and explored the bladder with the finger, removing a large slough. A short tube was inserted, and, although the patient lived only two days, he was relieved of his pain and slept for several hours, which he had not done for many weeks previously. After death a central sloughing area was found, attributed to contact with the catheter; and at one spot this sloughing had penetrated the serous coat, extravasation being prevented by adhesions. The last case was still in hospital. It was one of enlarged prostate with much hæmorrhage, which required frequent catheterism, and Mr. Morris thought it right to explore through a median incision. Although the patient is thin and tall, he could not reach the neck of the bladder with the finger in the wound, the prostate being so enlarged and lengthened. This illustrated one difficulty which might arise in the digital exploration. The patient is now using a catheter through the wound, but all hæmorrhage has ceased, so it was probable that the source of the blood was from the congested prostate.—Mr. VINCENT JACKSON (Wolverhampton), pointed out that Sir H. Thompson had not claimed novelty for this method of entering the bladder, but for its application to the diagnosis and removal of tumours, finding no other plan of avail than that which allowed him to explore every portion of the bladder with the finger. He (the speaker) had often tapped the bladder through the perineum in cases of stricture, and well remembered Mr. Quain doing so at University College Hospital twenty years ago. This method of opening the bladder permitted not only of drainage, but of ready irrigation.—Mr. T. SMITH assured Sir H. Thompson that it was not a "new" method, for it was one with which he had been familiar from his earliest surgical days. He also thought it was the usual practice to examine the bladder with the finger after lithotomy. It had long been customary at St. Bartholomew's Hospital to examine the bladder with the finger introduced through the incision described, and he appealed to the author, as such operations were often done to remove sources of irritation, to strike out the phrase "a new method." —Mr. SPENCER WELLS pointed out that the removal of tumours from the female bladder often affords permanent relief. One of his first cases at the Samaritan Hospital was that of a woman, who was bleeding to death from a small mucous polypus, which he extracted, with the result of complete restoration to health. He had since twice removed similar polypi with the same good result; so that he thought some of those cases supposed to be malignant were really innocent growths.—Mr. BERKELEY HILL thought it interesting that all the growths removed by Sir H. Thompson were fibromata, which were said hitherto to be rare forms of tumour of the bladder. For his own part he would prefer using the wire écraseur to the forceps in removing large senile growths, for fear lest important structures might also be torn away. Billroth has in such cases removed the tumour by a compound operation, opening the bladder from above. There is no difficulty in exploring the bladder provided it be empty.—Mr. MORRIS explained that in his case the bladder was completely empty; its neck could not be reached owing to the great length of the prostate.—Dr. AVELING suggested that the female bladder might be opened for the removal of large growths through the vesico-vaginal septum, the urethra not allowing of much scope.—Mr. EVE said that histologists were gradually coming to admit that all these growths of the bladder were fibrocellular in nature, ordinarily described as papillomata. There are, however, forms of papillomata, "villous tumours," which pass into epitheliomata, with scattered growths elsewhere in the mucous membrane, and liable to recurrence on removal.—Mr. STANLEY BOYD said that two of the tumours he examined for Sir H. Thompson were quite smooth on the surface, and only presented minute villous projections. They were mainly composed of fibrous tissue, like that which forms the central part of a villous tumour. All tumours on mucous surfaces tend to become papillomatous. —Mr. DURHAM explained that his point was that the urethra could be opened in the perineum satisfactorily and well in cases where a staff could not be used.—Mr. SHATTOCK thought more regard should be paid to the pathology of these tumours, and suggested that in malignant cases portions of the bladder should be excised on the same principle as excision of the pylorus was practised for cancer of that region. The bladder had been successfully sutured after rupture. He exhibited an instrument, constructed in the form of a lithotrite but with blades which worked laterally, as useful for detecting tumours, and removing them if small. He also pointed out that papillomata were generally seated at the trigone—i.e., near the three orifices of the bladder, and they might be compared to warty growths occurring at other outlets; moreover, the mucous membrane at the trigone was less movable than elsewhere.—Sir HENRY THOMPSON, in reply, said that although he had endeavoured to make his paper clear he was forced to declare that he had been misunderstood. The operation, which at Guy's Hospital was associated with the name of Cock, had been known for two centuries; it was practised particularly by the French surgeons, by whom it was known as "la boutonnière." It was not a cystotomy nor a median lithotomy. The conditions for which Mr. Durham operated were in cases of stricture, &c., and for these cases the operation was a well-recognised one. Its present novelty consisted in its extension to cases for which it had never yet been thought of, cases in which there was no means of detecting organic disease save by digital exploration. Out of fifteen cases in which he had performed the operation for diagnostic purposes he had discovered tumours in five cases; and he asked if either at Guy's Hospital or St. Bartholomew's, five cases of tumour so detected and removed during life had been dealt with. There were no specimens of such cases in their museums. They were cases usually overlooked, treated in the medical wards by styptic injections, and he believed that his suggestions would result in finding many such cases. Mr. Smith's remark, that it was always the custom to explore the bladder with the finger after lithotomy, was so far true, because the finger is already in the bladder; but how often is a digital examination made for a second stone. As a rule, the sound is introduced for this purpose because the whole interior of the bladder cannot be explored, as it can be by the median urethral incision. He was glad to hear Mr. Whitehead's experience, and believed that these tumours were more common than was suspected. In one of his cases, seen with Sir W. Jenner, where there had been persistent hæmaturia almost to death, he had removed a scale of phosphatic matter, and the hæmorrhage had not recurred. He doubted Mr. Harrison's case being one of scirrhus; it seemed rather one of those fibroid growths of the prostate which can be enucleated.

## OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on Wednesday, January 10th, 1883, Dr. Matthews Duncan, President, in the chair.

*Sacral Teratome.*—Dr. HEYWOOD SMITH exhibited a Fœtus of about five months' intra-uterine age, having an outgrowth from the end of the coccyx about three inches and a half long, and seven inches in circumference. This consisted mainly of embryonic tissue: small round cells with a faint

fibrillar arrangement. From the coccyx were traceable four vertebræ, consisting each of a cartilaginous body with spinous processes.

*Porro's Operation.*—Dr. HEYWOOD SMITH also exhibited a Uterus removed by Porro's operation. The patient was a primipara aged twenty, the conjugate diameter of whose pelvis was one inch and three-quarters or less. She had been in labour two days, and attempts at delivery by craniotomy and cephalotripsy had been made without success. The performance of Porro's operation occupied nearly an hour. The specimen showed clearly the rugæ on its peritoneal surface.

*Superfœtation (?)*—Dr. OUTHWAITE exhibited a body looking like an Ovum of about a month's intra uterine age, which had been passed within thirty-six hours after the birth of a full-time child. The specimen was referred to a committee for examination and report.

*Notes of a Specimen of Anteflexion of the Uterus.*—A paper by Mr. W. S. A. GRIFFITH on the above subject was read. The specimen was one in the Museum of the Sussex County Hospital at Brighton. The uterus was sharply anteflexed, and was fixed, and the adjacent parts agglutinated into one mass by firm old adhesions. The uterine cavity was dilated into a sac the size of an almond, and contained the remains of a clot. The patient had died from peritonitis while menstruating. Except for a previous attack of peritonitis, she had had remarkably good health. She was unmarried, and had never complained of painful menstruation until asked, during her fatal illness, when she said she had pain towards the ends of her periods. The bend was at the junction of the body and cervix. The cervical canal was not contracted, but rather larger than usual. There was no atrophy of the uterine wall. The author rejected obstruction as a cause of the dilatation, which he thought due to chronic congestion. He thought the specimen interesting as showing that acute flexion of the uterus might exist without interfering with the nutrition of the uterus, or with the general health.—Dr. ROUTH thought this specimen did not prove that the canal of a flexed uterus was not constricted; for the patient was menstruating, and the canal became dilated during menstruation. Further, the uterine cavity was here ulcerated, and this might have enlarged the canal.—Dr. GRAILY HEWITT said that without contraction of the canal there might be virtual obstruction from the coaptation of its opposite walls, and from the swollen congested condition of the uterine tissues resulting from the flexion. This was proved by clinical facts.—Dr. HERMAN agreed with Mr. Griffith that this case showed no evidence that the dilatation was due to obstruction. There was no angulation nor narrowing of the canal, which was bent in a curve. The uterus was fixed; and if it were admitted that here the dilatation was due to obstruction from flexion it did not follow that the same effect would be produced in a uterus which was free to move.—Mr. GRIFFITH said that microscopic examination showed that the apparent ulceration was due to the patient having just ceased menstruating.

*Case of Extirpation of the Uterus and Appendages for Epithelioma of the Cavity.*—This paper, by Mr. KNOWSLEY THORNTON, was then read. The author thought that these operations being still on their trial, it was a duty to fully report every case. This duty was not sufficiently recognised. This reticence indicated that they were rarely immediately successful, and when they were, gave but a short interval without recurrence. He argued that speedy recurrence was to be expected. He had refused to operate in many cases, and thought that the only justifiable ones were those in which the disease was confined to the cavity or body of the uterus. He then gave at length the history of such a case, with details of the operation, and after progress to death on the fifth day. He referred to the statistics of the operation by the abdominal and vaginal methods. In any future case he would choose the vaginal method, and would avoid the use of ligatures altogether, leaving pressure forceps on for the first few days. These would serve as drains, and at the same time by their weight tend to draw together the wounded surfaces.—Dr. EDIS suggested that in the abdominal operation septic infection might be avoided by removing the uterus per vaginam.—Dr. AVELING said that drainage was, he believed, first advised by Purmann in 1706, and in England by Johnson in 1769.—The PRESIDENT had taken part in three of these operations, all of which proved fatal. He was struck with the greater facility of the vaginal operation.—Mr. THORNTON replied.

*Transfusion.*—A paper on this subject by Mr. C. E. JENNINGS was read. The author remarked on the dangers and difficulty of transfusion, which he thought too grave to be undertaken by a practitioner alone, at a moment's notice. Defibrination of the blood rendered its nutritive value very small. But the value of transfusion depended primarily not on its nutritive, but on its dynamic, effect. This latter could be procured with greater certainty by the intra-venous injection of a large quantity of saline fluid. He had invented, and elsewhere described, a syphon for such injection. This instrument he had now modified, so that blood transfusion might be combined with the saline injection. The flow of saline fluid into the recipient's vein having been established with the syphon, the blood-donor's vein was opened with a trocar and cannula specially devised for the purpose, and the blood conducted by a tube into one limb of a Y-shaped glass tube, through the other limb of which the saline solution flowed, and by this the blood was carried on into the recipient's vein. Coagulation was prevented by the addition of a few drops of liquor ammoniæ to the saline solution. Should the blood-donor become faint, by turning a stopcock the current could be reversed, and the saline solution made to flow into the donor's vein.—Dr. AVELING thought the interest of the paper was in the proposal to substitute saline fluid for blood. He thought the apparatus a bad one; there was no certainty that blood would flow through it, no way of telling whether it was flowing or of measuring its quantity. The reversal of the current he thought dangerous, tending to carry clots into the donor's circulation. Life might sometimes be saved by auto-transfusion, raising the patient's feet high above her head.—Dr. ROUTH said that Mr. Jennings's solution contained potash salts. It had been found by experiment that the injection of potash salts was poisonous. The valves in the donor's veins would prevent the proposed reversal of the current.—Dr. GRAILY HEWITT thought the chief point in the paper was the attention directed to the dynamic effect of transfusion. This, he thought, was probably very important. There was great difficulty in deciding when the operation was necessary. Patients after post-partum hæmorrhage might rally, and yet perish some hours later without further loss of blood.—Mr. FENTON-JONES thought Mr. Jennings's syphon an admirable instrument. The solution had been used with success, and therefore was not poisonous. He thought the current of saline fluid would act as a *vis a fronte*, and carry on the blood.—Dr. FANCOURT BARNES said that he had found it difficult to get the blood to flow from the donor's arm, even with Roussell's instrument.—The PRESIDENT regarded transfusion as little more than a hopeful proceeding, demanding encouragement and study. Patients who survived it were often spoken of as having been saved by it—a manifest mistake. In many cases it had caused death. Sets of cases of transfusion, occurring in single practices within a limited time, were often published; he could not admit that extreme danger occurred so often. Injections of plain water had been used in cholera with splendid but temporary benefit; he would like to see it have a fair trial in cases of hæmorrhage. The attempt to use blood introduced most of the difficulties and dangers of the operation, and these were increased by complicated apparatus. He would use any good, clean syringe, preferably a glass one.—Mr. JENNINGS only advocated blood transfusion for the minority; he thought it dangerous. He had found by experiment that a few drops of liquor ammoniæ would prevent coagulation. He thought that the collateral circulation through venous anastomoses would allow the saline fluid, when the current was reversed, to enter the donor's vascular system. The amount of blood taken should depend upon the effect of its loss on the giver, not on measurement by ounces.—Dr. HERMAN said that saline intra-venous injection had been used at the London Hospital in four cases of puerperal hæmorrhage, of which two recovered and two died; water once, and the patient recovered.

## EPIDEMIOLOGICAL SOCIETY.

A MEETING of the above Society was held on the 3rd inst. at University College, Dr. George Buchanan, F.R.S., in the chair.

A paper was read on the Planning and Construction of Hospitals for Infectious Diseases, by Mr. GORDON SMITH. The author commenced by stating that, having regard to the serious pecuniary loss, no less than to the vast amount of

individual anxiety and misery, caused by outbreaks of epidemic disease in any district, it is surprising that the degree to which it is possible to prevent the ravages of such outbreaks is at present so imperfectly appreciated by the public. Hospitals for infectious disease must provide for the admission and treatment of at least two kinds of infection, the arrangements being such as to allow of this being done with reasonable security that a patient admitted for one disease shall not contract another disease consequent on his stay in the hospital; for small-pox the accommodation ought to be so completely separate as possible. Indeed, where practicable, it is well to have an entirely separate hospital for that disease. The site for a hospital must be of such extent as to allow the several buildings to be at an ample distance from the boundaries, and well separated from each other, so as to permit free circulation of air about, and access of sunlight to, them, and at the same time prevent inter-communication among the nurses and patients occupying the several ward-blocks. Spare land should also be kept to provide for future extensions, permanent or temporary, and also as a recreation ground for convalescent patients. The extent of site should be such as to allow not more than twenty patients to the acre, and the land should be effectually enclosed with a solid fence not less than six feet high. The hospital buildings may be divided into three classes—viz., (1) the administrative; (2) the patients' department; and (3) the various out-offices. The administrative department should stand in advance of the ward-blocks and be moderately near the entrance gates, in order to prevent tradesman and others coming into contact with the nurses or patients. Patients must be rigorously excluded from this department, and it must be easily accessible from the buildings set apart for the treatment of patients. It should contain the usual domestic offices, store rooms, and apartments for the care-taker and medical officer. In the upper storey ought to be situated the nurses' bedrooms, and a bath-room is a useful adjunct. The patients' department must be so arranged as to have distinct open-air communication between every ward-block and the administrative department. Between each pair of wards in each ward-block it is advisable to have the nurse's room, bathing accommodation, and a small but well-ventilated pantry in which the supply of milk, beef-tea, &c., for the day or night's use may be kept. It is unadvisable to exceed twenty beds in a single ward-block in a hospital for infectious disease. Wards of two or more storeys in height are objectionable as increasing the difficulty of supervision and administration, and the vitiated and infected air of the lower wards will be likely to find its way into the upper wards. A few small wards for one or two patients each are always useful in an infectious hospital. Plans prepared by Mr. Keith D. Young, architect, were then exhibited, showing an arrangement of private rooms at a hospital for infectious diseases which Dr. Charles West hopes to get built at Nice. Windows with double-hung sashes and floors of oak or red deal, polished with beeswax and turpentine, are generally preferred for wards. No cornices, mouldings, &c., on which dust can lodge are permissible, and it is recommended that all internal angles should be rounded. Water-closets and sinks, which should be placed in a projection from the end of each ward, should be separated from the ward by a cross-ventilated lobby, the closets themselves also having means of cross-ventilation independent of the lobby. For warming, stoves and hot-water pipes are recommended; and for the admission of fresh air, openings having an area of about 100 square inches are recommended in the opposite external walls at the floor level, one behind each bed. The wards should be elevated by means of arches slightly above the level of the ground, and the ground underneath, and for a short distance around the ward, should be covered with a layer of concrete. The out-offices comprise washhouse, disinfecting-house, ambulance, and dead-house. The wash-house and laundry should be large; the disinfecting chamber should be near the laundry, and have a thoroughly efficient apparatus capable of dealing with mattresses, bedding, &c., as well as ordinary clothing and carpets. The drainage of a hospital for infectious diseases differs in no essential point from that of any other building. The drains should be laid in direct lines, with uniform gradient between the points where a change of direction or of gradient occurs, and at each of these points means of access to the drain should be provided either by a lamp-hole or a man-hole, so that the entire system of drains could be inspected with ease at any moment.

The above paper was followed by an account of the use of Tents for the Treatment of Small-pox, by Mr. G. W. COLLINS, who has had experience of this mode of treating small-pox during the summer of 1881 at Finchley, and at Wednesbury during the recent epidemic in that district. He claimed the superiority of the hospital marquee over the Redcliffe tent and wooden buildings, on the following grounds: 1, the marquee contains double the amount of cubic space; 2, the ventilation can be regulated at will; 3, a more even temperature can be maintained with less trouble. During the summer of 1881, when in charge of the small-pox hospital at Finchley, he found that with a temperature of about 104° in the sun the tents could be kept perfectly sweet by looping-up the sides and opening both ends. In neither epidemic did the tent-life give rise to any pulmonary complications.

In the discussion which followed the reading of the two papers, Dr. Thorne, Surgeon-General Gordon, Dr. C. E. Saunders, Dr. Collie, and Messrs. Saxon Snell and Robins took part.

## MEDICAL OFFICERS OF HEALTH SOCIETY.

A MEETING of this Society was held on January 19th, 1883, Dr. J. W. Tripe, President in the chair.

A paper on an extensive Outbreak of Diarrhœa from polluted water was read by the PRESIDENT, of which the following is an abstract:—On November 6th, 1882, he received information that the inhabitants of almost every house on Clapton Common had been seized with diarrhœa and sickness, accompanied in some cases by more or less depression. Inquiry showed that the milk came from several sources. The chief outbreak occurred on November 4th and 5th. On the 7th, at the request of the author, the Clapton main was thoroughly scoured out. On the 8th fresh cases occurred; and on the 10th the main was again cleansed. Cases also occurred on the top of Stamford-hill, while those at Clapton were likewise confined to the higher part. An examination of the plans of the Company's mains showed that a cross main extended from Clapton to Stamford-hill and adjoining roads, and was connected with the Kingsland and Stamford-hill mains at a point immediately below where the disease had occurred, and that the main at Clapton Common terminated in a dead end without any valve. Some hundreds of persons were affected, often several cases occurring in one household. A house-to-house visitation was not made, but the author heard of several cases in which water-drinkers alone in a family were affected, and there were several striking instances in which visitors were attacked. Thus two ladies took luncheon at a house on the common, one drank sherry and the other sherry-and-water; the former escaped, the latter suffered. Another visitor to another house took luncheon and drank water, with the result of being attacked on his return to Chiselhurst. There were three servants in one family, two of whom were water drinkers, the last not; the water-drinkers alone were affected. The disease was not fatal to anyone. Analysis of the water showed but a very slight increase of organic matter; but on November 7th, Mr. Wigner, to whom a sample had been submitted, found some vegetable débris, consisting of fibres, mycelium, and some animalcules, but no sewage fungus. On the 9th there were no animalcules or mycelium. The author believed that the presence of a main with a dead end at the top of the hill had allowed a growth of mycelium, and perhaps of other organic bodies, owing to the water remaining there unchanged for some time, and that they became suddenly mixed with the ordinary supply a day or so before the outbreak. In the discussion which followed, Dr. Corner, Dr. Corfield, Dr. Gwynn, Mr. Shirley Murphy, Dr. Heron, and Dr. James Stevenson took part, and the President replied.

## ACADEMY OF MEDICINE IN IRELAND.

### OBSTETRICAL SECTION.

AT the meeting of the Section on Dec. 22nd, the President, Dr. DENHAM, delivered his opening address, taking for his subject the Progress made in Obstetric Medicine during the Last Fifty Years. He selected as the basis of his remarks a comparison of the Rotunda Hospital Reports of Drs. Collins and Shackleton with those recently published by Dr. George

Johnston. Dr. Collins during his seven years' Mastership had 16,414 deliveries, in which the crotchet was used 118 times and the forceps or vectis 27 times. The number of deaths amounted to 164. Dr. Shackleton reported 13,748 deliveries, with the use of the perforator in 130 cases and of the forceps in 200 cases, and the loss of 163 patients. Dr. Johnston reported 8908 deliveries; 28 craniotomy, 90 version, and 750 forceps cases. He lost altogether 169 patients. Commenting on these figures Dr. Denham observed that it was patent that by the more frequent use of the forceps in modern obstetrics much had been done for relief without adding to the dangers of labour, and that great numbers of children were now delivered alive who under the old practice would have had to be destroyed. The beneficial results of the introduction of chloroform, the greater use of sea-tangle tents, the operation of ovariotomy, followed as it has been by so many new operative procedures, were briefly alluded to as having done much to bring gynæcologists into the front ranks of bold and successful operators, and to break down the barrier which at one time existed between this and other branches of the profession.

Mr. ARTHUR BENSON exhibited a male patient showing a well-marked example of recent Spontaneous Detachment with Rent in the Substance of the Retina.

Dr. G. F. DUFFEY showed the Heart and Pericardium of a male patient, aged fifty, exhibiting the recent pathological effects of an acute pericarditis which had lasted only for about eighteen hours.

Dr. ROE exhibited a series of Frozen Sections which he had lately made:—(1) Section through medial horizontal plane of fœtal head; (2) section through the shoulder-joint and upper part of the chest; (3) section through the level of the third costal cartilage.

Dr. POOLE showed, for Dr. Kidd, two Dermoid Ovarian Cysts removed from an unmarried patient, aged thirty-eight. The growth of the tumour had been noticed for three years. The larger tumour involved the left ovary, and weighed on removal about 6 lb. It consisted of numerous loculi of various sizes, some containing glairy mucoid fluid, and others masses of sebaceous matter mixed with hairs. Hard centres of ossification were felt in a portion of the cyst walls; one of the larger cysts contained a matted mass of long dark hairs, on removing which a mass of bone was found jutting sharply into the cavity, and bearing on its apex two closely united teeth. The smaller tumour belonged to the right ovary, and consisted of two cavities, one containing sebaceous matter with a few hairs, and in one part of its walls a mass of bone; the other contained a quantity of light-coloured hair and several teeth irregularly set in a bony wall.

Dr. NEVILLE exhibited a specimen of Fœto-amniotic Adhesions, associated with numerous Deformities of a Full-time Fœtus, including complete Ectopia of the Abdominal Viscera, and with it a four-months fœtus, around whose right fore-arm the funis had become looped and adherent, associated with deformities of both hands, &c.

Dr. MORE MADDEN read a paper on Cicatricial Occlusion of the Vagina. Clinical experience of retained menstruation or impeded parturition, consequent on post-partum adhesions of the vaginal walls, is, he said, fortunately more limited than must have been the case formerly, when the second stage of labour was frequently allowed to run on for twelve or even twenty-four hours, and when instrumental assistance was directed by the most eminent authorities to be withheld until the vital powers were all but exhausted. Still such cases are occasionally met with. Of somewhat greater frequency in the causation of this condition in modern practice is the opposite error of premature application of the forceps before the natural dilatation of the passage, or by the misdirected force or undue haste with which instrumental extraction may be effected. Another source of such occlusion is the abuse of escharotics for the treatment of uterine disease. Apart from these causes, the occurrence of vaginal occlusion after parturition is exceptional. A case of this kind recently came under his care in the gynæcological ward of the Mater Misericordiæ Hospital. The patient, married, aged thirty-eight, had given birth to four children. She never had any difficulty in parturition, and her recoveries were always rapid. Six months before admission she had a miscarriage on the fourth month. This was caused by over-exertion, and presented nothing peculiar. Up to this time her general and uterine health had been excellent. Two months after miscarrying she began to complain of obscure pelvic pain, with sense of local fulness and bearing down. He menses did not return, and as she had previously been very regular in this respect, she naturally supposed herself to be again pregnant. The pelvic pain increasing, however, and being now attended with dysuria, troublesome tenesmus, and obvious impairment of her general health, she sought medical advice. When admitted into hospital, the pelvic cavity was found to be filled by a large globular tumour, which extended backwards so as to flatten the rectum against the sacrum, and upwards and forwards so as to displace the bladder. The entrance to the vagina was thus obstructed, so that the finger could only be passed in for an inch and a quarter. On bi-manual recti-abdominal exploration, the uterus was found enlarged to the size of the fourth month, but in its normal position. The patient was then placed in the lithotomy position, the parts widely separated by retractors, and the seat of the obstruction was seen to consist of a tense, convex, fibrous-looking septum. This diaphragmatic-looking cicatricial structure was punctured with a fine trocar, and a small quantity of retained menstrual fluid drawn off by the aspirator. As the fluid was too viscid to pass freely through the cannula, the aperture was enlarged so as to admit the point of the finger, with which it was torn through so as to allow the gradual escape of about eighteen ounces of thick, treacle-like, catamenial matter. For two days afterwards this continued to drain away, and probably as much more escaped in this way. The membranous partition described formed the floor of a large hour-glass-shaped cavity, the lower part of which was bounded by the distended vaginal walls, communicating through the open os and expanded cervical canal with the dilated uterine cavity which formed its upper and smaller portion. On the day following the operation she had rigors, her pulse and temperature ran up, the abdomen became tympanitic, there was considerable uterine pain and tenderness, and for the ensuing week her life hung in the balance from severe metro-peritonitis. This, however, ultimately subsided under treatment. The opening was then cautiously and gradually expanded by dilators, and kept patulous by glycerine tampons until all trace of constriction had disappeared. She was retained under observation until the next monthly period, which was perfectly normal, had passed over, and being then well, was discharged from hospital. The treatment of cicatricial vaginal obstruction is by no means as safe as it is facile. And the safest instrument in the removal of these adhesions is the surgeon's finger—the mortality following the use of any cutting instrument being nearly threefold that resulting from their digital separation.—Dr. ATTHILL said that the case was unique in his experience. He did not think that the occlusion could have resulted so completely from any abuse of caustics. It was probably due to the occurrence of adhesive inflammation, such as he had seen result in a like way in the case of women who had never been pregnant.—Dr. KIDD narrated the history of a case recorded by the late Dr. Sawyer, in which a cicatricial occlusion of the vagina was found as an impediment to labour at the end of her second and third pregnancies, the occlusion having on each occasion to be opened up by crucial incisions. He insisted on the impossibility of negativing the co-existence of pregnancy with almost any amount of occlusion.—Dr. J. A. BYRNE thought atrophic contraction was limited to older women than Dr. Madden's patient. Strong escharotics injudiciously applied were, he thought, among the most frequent causes of vaginal or cervical occlusion. When retention of the menses resulted, they should be let out slowly and cautiously.—The PRESIDENT thought that conception might occur in spite of very considerable occlusion. Occlusion did not seem to be so frequently met with now as when the forceps was less often and more tardily used.

Dr. NEVILLE read a paper on Breaking Strain, or Tensile Strength of the Umbilical Cord, founded upon 125 experiments made by him on the fresh cords of full-time children. Having explained the method of making these experiments, in which only the 12–14 inches of the cord nearest to the placenta were tested, he stated his conclusions as follows:—In 100 cords from which the blood had been allowed in great part to escape before subjecting them to strain, the average tensile strength amounted to 12·51b.; one cord bore a strain of 27lb.; nine cords a strain varying from 20lb. to 25lb.; eighteen of from 15lb. to 20lb.; forty-eight of from 10lb. to 15lb.; twenty-three of from 5lb. to 10lb.; and one of less than 5lb. In the case of twenty-five cords tested without allowing any escape of the blood contained in them, the average breaking strain was found to be very little above 11 lb., or nearly one and a half pounds less than in

the other case. The cords belonging to male were found to have an average strength of 1·5lb. more than those of female children; multiparity made no appreciable difference in strength. Dr. Neville considered the question of a gradual drag as affecting inversion of the uterus. Assuming as conditions a strong funis abutting at or near the centre of the fundus on a firmly adherent placenta, and a flaccid pliable uterus wanting in contraction and retraction, he thought improper tractions on the cord very likely to terminate in inversion.—Dr. MACAN considered that there could be no doubt that inversion might readily be effected by pulling on the cord under the circumstances laid down in the paper. He would lay special stress on the fact that traction, in order to result in this way, should be made at right angles to the uterine wall, at the site of placental attachment. This only could happen when the placenta had a fundal attachment.—Dr. ATTHILL compared inversion as an accident of delivery with that which resulted from an intra-uterine tumour. In the one case he believed that, as a matter of personal observation, the tumour, and in the other case the placenta, would always be found attached to the fundus. The fundus was the part of the uterus most susceptible of irritation. Irritation would set up contractions, and these would expel either the tumour or placenta, and along with either might invert the uterus. Pulling on the cord might facilitate the inversion, but could not act as a sole cause of this accident.—Dr. NEVILLE did not reply.

Dr. J. R. KIRKPATRICK exhibited a specimen of a Mummified Fœtus, with the Placenta and Membranes belonging to both children, of a pregnancy which had gone to full time. There was a single placenta and double membranous sac, that portion of the placenta which belonged to the mummified fœtus being shrunken and degenerated. The fœtus appeared to have died about the sixth month, and to have been since retained without occasioning any pathological symptoms. It was first born, after which the other child presenting by the shoulder was turned and born alive and healthy. The living child, a female, weighed 8lb. The placenta was quickly afterwards naturally expelled. The mother was a healthy multipara, aged thirty-three years, her six previous labours having terminated normally.

# Reviews and Notices of Books.

*A System of Surgery, &c.* By SAMUEL D. GROSS, M.D., D.C.L. Oxon., LL.D. Cantab., Emeritus Professor of Surgery in the Jefferson Medical College. Sixth Edition. Two volumes. London: Smith, Elder, and Co. 1882.

*Lectures on Surgery.* By JAMES SPENCE, F.R.S.E., Surgeon to the Queen in Scotland, Professor of Surgery in the University of Edinburgh, &c. Third Edition. Two volumes. Edinburgh: Adam and Charles Black. 1882.

WE have placed these books together partly because they happen to have reached a new edition about the same time, and partly because, in spite of some differences, they possess many features in common. Each is written by a teacher of unusually large experience; each is based on a long course of professorial lectures on systematic surgery, and each is almost exclusively the work of one hand. These characteristics suggest some reflections on the changes that are gradually revolutionising professional literature.

Whether for good or for evil, the day seems to be rapidly dawning when works like those named at the head of this notice will become extinct. The growth and differentiation of medical and surgical knowledge, the increasing complexity of professional affairs, the continuous evolution of specialties in practice will tend to throw the bulk of medical writings more and more into the hands of experts. Already the shadow of the new order of things is upon us. Systems, dictionaries, and cyclopædias, by many hands, spring up like mushrooms, and threaten to extinguish the old-fashioned treatises framed upon antecedent lectures in which our fathers delighted. The latest development of the innovation has assumed the form of an "International" Cyclopædia of Surgery, owning, it is needless to remark, a transatlantic origin. To all this there is no serious objection, provided the purposes for which these books are compiled are not lost sight of or misunderstood. Works of reference are becoming increasingly necessary in every department of knowledge, and it is essential that the material out of which they are formed should be drawn from trustworthy sources. Accuracy and multiplicity of details are the chief desiderata in a work of reference. But in works intended for primary instruction something else is needed. Lucidity, method, and consistency now become paramount. What Descartes has said of philosophical systems and the various forms of knowledge may be applied to the construction of all educational works. "There is," he says, "seldom so much perfection in works composed of many separate parts, upon which different hands have been employed, as in those completed by a single master"; and, by way of illustration, he adds, "The sciences contained in books (such of them, at least, as are made up of probable reasonings without demonstrations), composed as they are of the opinions of many different individuals massed together, are farther removed from truth than the simple inferences which a man of good sense, using his natural and unprejudiced judgment, draws respecting the matters of his experience." This is especially true of medical writings. A cyclopædia of multiplex origin is usually a heterogeneous mass of detail forming a grotesque and incongruous whole. Some of the articles may possess technical merit, but many are crude collections of isolated facts, and occasionally it happens that two or more articles in the same volume are mutually destructive. On the other hand, a work by a "single master" will not only be free from these defects, but it will exhibit a unity of purpose and a harmony of effect indispensable to the elucidation of fundamental principles and the inculcation of knowledge. For the attainment of these ends the conditions of medical authorship would require to be more strictly imposed. Though there may be many teachers, few possess all the qualifications needed to write a systematic treatise on any branch of medical science. Mere ability will not suffice; the task demands a combination of talents rarely bestowed on one individual. A writer and teacher of the highest rank needs not only an active and cultivated intelligence, but he should in addition possess the instincts of a scientist and the insight of a philosopher. His faculty of observation should be prompt and unerring, his reason clear, his judgment sound; his knowledge of medical literature, methods, systems, and doctrines should be wide and accurate; and his acquaintance with collateral learning thorough, if not familiar. Doubtless many an author has attained popularity without these qualities; though none, perhaps, has acquired classic fame who did not possess them in some degree. The difficulties are, of course, greater now than formerly. It is not possible for one person to be adept in every department of medical and surgical knowledge; but it is not necessary that a man should be a polymath to be a successful and even a great teacher. Sound knowledge is indispensable, but soundness of knowledge implies depth rather than extent, and consists, as has been well said by the author of the "Intellectual Life," in "the complete possession of its essential parts." The essential parts of every art are the principles underlying it, not all the details of their application. Indeed, the bane of modern education is that soundness is sacrificed to versatility and facts made to assume the place of principle. This suggests the inquiry whether the art, no less than the science, of medicine is not greatly hampered by the circumstances of professional life, and whether each should not have its proper professors. As matters now stand, almost every medical teacher who is not possessed of private fortune has to discharge three distinct and independent duties which are always more or less conflicting and often antagonistic. He has to distribute his time and energies over research,

exposition, and practice. The successful performance of one of these tasks often militates against an effectual prosecution of the others. Harvey, the scientist and philosopher, well-nigh ruined Harvey, the medical practitioner. "After his book on the 'circulation of the blood' came out, he fell mightily in his practice; 'twas believed by the vulgar that he was crack-brained and all the physitians were against him." Whether the discoverer of the circulation of the blood was better employed in investigating the mysteries of biology, or exercising himself in "his therapeutique way" by writing prescriptions for which few practitioners would "have given threepence," it is scarcely necessary to ask. The impracticability of attempting to combine the scientist, the philosopher, and physician has been repeatedly demonstrated.

Kant, nearly a century ago, in reference to the necessity of a division of labour, said: "It might deserve to be considered whether pure philosophy in all its parts does not require a man specially devoted to it, and whether it would not be better for the whole business of science if those who, to please the tastes of the public, are wont to blend the rational and empirical elements together, mixed in all sorts of proportions unknown to themselves, and who call themselves independent thinkers, giving the name of minute philosophers to those who apply themselves to the rational part only—if these, I say, were warned not to carry on two employments together which differ widely in the treatment they demand, for each of which a special talent is required, and the combination of which in one person only produces bunglers. But I only ask here whether the nature of science does not require that we should always carefully separate the empirical from the rational part."

The duty of the medical practitioner, as such, is to diagnose and treat disease, and to employ those means that science has placed within his reach for the prevention, alleviation, or eradication of human suffering. It is no part of his task to attempt the solution of abstruse biological problems. And so he who is fitted by natural tastes, aptitudes, and mental habits to engage in scientific search should not be distracted by the consuming cares of professional practice or wearied by the tedium of elementary teaching. John Hunter, resentful at the interruption of his dissections by the necessity of earning that "guinea," manifested the genuine spirit of a scientific worker. Between the two extremes of the scientific worker and the practical physician the teacher will find his true place and purpose. He should unite in himself the shrewdness of the practitioner and the enthusiasm of the investigator. While utilizing the labours of both, he should preserve himself from their prejudices. His mission is to expound the doctrines of science, not to bolster up theories whether of his own devising or of another's; and even in teaching medical art he must be neither apologist nor partisan. His privilege is to foster thought in others, and to influence the mind and character of his pupils. This he can only do by keeping his own mind free of degrading prejudices and jealousies. In the words of Locke he "should keep perfect indifferency for all opinions; not wish any of them true, or try to make them appear so, but, by being indifferent, receive and embrace them according as evidence, and that alone, gives the attestation of truth." This is impossible as long as success in practice is the goal at which every medical teacher has to aim. Profundity of thought is not to be expected in one who is distracted by the struggles of professional existence, nor judicial impartiality in a competitor for patients. Whether the attractions of teaching will ever supersede those of lucrative practice may be doubtful, but until they do, it is certain that, as heretofore, the greatest teacher will always sooner or later be lost in the fashionable and prosperous practitioner.

We have purposely abstained from comment or criticism of the books before us. They have formerly been noticed more than once in our columns, and it is enough now to remark that the present editions fully maintain the reputation the works have acquired. We have preferred to confine ourselves to a consideration of the conditions out of which they have arisen, and to throw out some hints for the reform of medical teaching and education.

One word in parting. Though Professor Gross's book is the outcome of his college lectures, the several parts have been extended, elaborated, and amplified, till it has become a complete and systematic book of reference alike for the student and the practitioner. The late Professor Spence's work, on the contrary, preserves its original character of university lectures, and as such affords a useful guide to the principles of surgery. A close scrutiny could discover defects, and here and there, perhaps, a few errors, but in its entirety the book is deserving not only of confidence, but of praise. We cannot do better than close this notice with the touching announcement prefixed to the second volume:—"The last line of this volume had been corrected, the last proof returned from the hands of the printer, when death removed its author from our midst; so the end of the work and of the worker have come together. The present edition is therefore in every way the perfect and ripe fruit of his experience."

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*Essentials of Vaccination.* By W. A. HARDAWAY, M.D. Chicago: Jansen, McClurg, and Co. 1882.

THIS work professes to deal in a short compass with the whole question of vaccination, and its author has certainly succeeded in his attempt. Beginning with a general history of the subject, it is shown that vaccination was known in many isolated places before 1775, as, for example, amongst the mountaineers of Mexico; but this fact admittedly in no way detracts from the exact and convincing character of Jenner's discovery. It is taken for granted that there is such a thing as spontaneous vaccinia in the cow, although it is said the disease is rare in America. Several chapters are devoted to such subjects as the history of variola in animals, to the course of vaccinia in the human subject, and some account is given of Reynaud's experiments as to the absorption by the lymphatics of the vaccine virus. Dealing with the question of revaccination, the author insists that the value of the protection afforded is in direct proportion to the thoroughness of the vaccination, and to the quality of the lymph employed; he evidently disregards the notion, which we must admit to be somewhat antiquated, that one revaccination only is necessary in connexion with the age of puberty, and he favours its somewhat frequent repetition even when no immediate danger of infection prevails. A large part of the work relates to the respective merits of bovine and humanised lymph, and in connexion with the subject of revaccination the author alleges that the virus which has gone through many successive transmissions does lose much of its prophylactic influence. Several authors are quoted as to this, but we cannot forget that the nurses in our small-pox hospitals are revaccinated once only with humanised lymph, and that they retain their immunity from an attack of small-pox notwithstanding.

It is also contended that vaccination with heifer lymph is as easy of accomplishment in equally skilled hands as with humanised lymph, and Dr. Warlomont's success as regards every insertion in 300 children is referred to. This, however, was with fresh lymph; whereas in the case of heifer lymph there must necessarily be a much more frequent resort to preserved lymph than in the case of lymph taken from the arms of children. Besides which, out of 2727 operations by Dr. Carstan, whose experience is also quoted, success at every insertion was only obtained in 1563 cases. The remaining 1164 therefore gave some measure of insertion-failure, a proportion unknown in this country in the hands of skilled vaccinators using humanised lymph.

Throughout the volume there is a strong leaning towards the abandonment of what we term arm-to-arm vaccination. Some of the reasons given are sound; certain dangers can be avoided, and some of the objections to the operation are more easily set aside. But the advantages of heifer lymph are, we think, exaggerated. Thus, it is hinted that if the vaccination be performed with such lymph, it is unnecessary to produce the same amount of local effect requisite when humanised lymph is resorted to—an opinion which we believe cannot be supported by any known experience. The questions of insusceptibility to vaccination, of erysipelas following on or due to vaccination, and the inoculation of syphilis, are also dealt with. The views of previous authors, such as Jenner, Marson, Seaton, Buchanan, and others are quoted on the various subjects dealt with, and care has evidently been taken to produce a useful handbook on the question of vaccination in its several aspects, and especially in its relation to small-pox.

*Muscles, Mind, and Morals; or, Hints on the Prolongation of Life.* By EDWARD T. TIBBITS, M.D. 12mo. Pp. 94. London: Simpkin, Marshall, and Co.

A SENSIBLY written little book, in which the importance of exercise in the maintenance of health is clearly laid down. While fully admitting the correctness of the author's statements, we would just point out that the difficulty that arises with many men, in the metropolis at least, is the time which would be occupied in faithfully carrying out the plan he prescribes. Throughout many months of the year a walk before breakfast is for a Londoner out of the question; but immediately after breakfast work begins, and most men have to get to their offices as quickly as possible. During the day exercise is impracticable, and we somewhat question whether a two or four mile walk when the system is tired out on an empty stomach, say at five or six o'clock, is very serviceable. Dr. Tibbits would, we have no doubt, say "Why toil so hard? take things more easily." But, alas, time is money, and the work that comes to a man must be got through, well if possible, but at all events got through. The rest of Dr. Tibbits' remarks are but an expansion of the old adage, "mens sana in corpore sano," and he shows in short compass the good influence that exercise duly maintained exerts not only upon the mind but the morals.

*Manuals of Elementary Science: Physiology.* By F. LE GROS CLARK. Pp. 143. Society for Promoting Christian Knowledge. 1882.

THIS is a sufficiently complete and accurate little textbook. We presume it is intended for the higher classes in schools and for those who desire to obtain a rudimentary knowledge of physiology. We notice, however, a few errors. Mr. Clark speaks of the red corpuscles as "disks *or* cells." The term cell should be dropped. Whatever the corpuscles may be, they are not cells. The estimated three ounces for the capacity of each ventricle is surely a little too low. The veins are said to have coats that are feebler than those of the arteries, but this is not so. A large vein will require a greater pressure to burst it than an artery of corresponding size. These, however, are slight slips of the pen, and, on the whole, the description of each organ would be intelligible to any moderately educated person.

*Brain.* January, 1883.

THE original articles in the current number of this journal comprehend several which are of considerable interest. The first is an excursus into the region of pure hypothesis regarding the possible origin of the systemic diseases of the spinal cord from functional disturbance, by Dr. H. Donkin. An account of some interesting observations on the characters of the loss of hearing in hysterical hemianæsthesia is contributed by Dr. Walton of Boston, U.S.A., the observation having been made in Charcot's wards. Dr. Ross, of Manchester, continues some clinical observations on the spasmodic paralysis of infancy. The theoretical pathology of angina pectoris and its bearing on the phenomena of counter-irritation, are discussed by Dr. Allen Sturge; and Dr. Ferrier describes a curious case of hemiplegic muscular atrophy. The shortest paper is perhaps the most valuable—a very careful collection of statistics on the subject of chorea by Dr. Angel Money.

## BILHARZIA HÆMATOBIA.

*To the Editor of* THE LANCET.

SIR,—My absence in Kamschatka during the summer and autumn has hitherto prevented my receiving mails in due course, and hence I have been unable earlier to reply to Dr. J. F. Allen's letter on the above subject published in THE LANCET of July 15th. As I am not unacquainted with this disease, and last year published a small monograph upon the subject, I trust you will allow me space to make a few remarks upon the letter in question.

Firstly with regard to the fact that the Bilharzia is found to affect the male very much more commonly than the female sex. Dr. Allen says "the reason is very evident; it is not so often found in girls; they, staying at home more, can as a rule get filtered water, but boys and natives, living much in the veldt, and drinking copiously from the first stream they come across, soon imbibe it." Now, even in South Africa, the habits of life of the two sexes are not sufficiently different to account for the enormously greater vulnerability of the male sex. Filters are by no means common in settlers' houses, and even when present, soon get broken and disused. Applied to North Africa too the hypothesis fails. In the record of Sonsino's cases, not a single female occurs, and yet his practice lay in the town of Zagazig, most of inhabitants of which have never even seen a filter. The mode of infection, so far from being very evident, is extremely obscure; but the supposition that river-bathing, which is but seldom indulged in by women, is in some way connected with the acquirement of the disease seems the most tenable.

Dr. Allen, after admitting that he has "never known or heard of anyone in this part of Africa dying from its effects," goes on to say that he has "never seen a case in which it was found elsewhere than in the bladder. It is quite certain that if it did take up other positions it would at once call attention to its presence.....I think we have good grounds to believe that it can only exist in its final state in the bladder." As a matter of fact the first discovery of the Bilharzia was made in the blood of the portal vein, and was published in 1853 in the *Zeitschrift für Wissenschaftliche Zoologie*. It has also been found in the mesenteric veins, in the ureters, the kidney, the spleen, the hepatic vein, and also in the lower bowel.

From such phrases as "it is clear that the parasite is perfectly harmless while circulating in the blood," "treatment which never affected the parasite in the bladder in the least, though it may have killed it in the blood," &c., it is evident that Dr. Allen regards the circulation of the adult parasite as an admitted fact. Not only is this not the case, but the size of the animal would effectually preclude the possibility of its passing through the small capillaries. What stages exist between the ciliated embryo and the adult is at present unknown, and how the animal reaches its destination is equally a mystery. But the chief object of my letter is to dissuade the adoption of Dr. Allen's treatment. So long ago as 1869 Dr. Harley tried topical medication of the bladder, but after a continuous treatment of some months the patient was still passing ova. Dr. Allen's first patient is purely a case of negative evidence. With regard to the others he merely says that he has "been invariably successful." Unless a permanent absence of the ova in the urine has been the result, the cases cannot be considered cured, and of this Dr. Allen leaves us in ignorance. So good an authority as Dr. Cobbold has said: "If you catheterise and employ medicated injections you do more harm than good." Dr. Allen allows that acute cystitis is a common result, and in a case with which I am unfortunately only too well acquainted, cystitis, acute nephritis with secondary pericarditis, and probable life-long ill-health, have been the unlucky consequences.—I am, Sir, yours truly,

F. H. H. GUILLEMARD, M.D. Cantab.

Yokohama, Japan, Nov. 27th, 1882.

# THE LANCET.

*LONDON: SATURDAY, JANUARY 27, 1883.*


IT has never been our lot to comment upon a sadder case than that which recently underwent investigation before Dr. DIPLOCK and a coroner's jury at Hounslow. The mind shrinks from its contemplation with feelings of horror and pain, for, look at it as we may, there appears no gleam of light to penetrate the gloom that overclouds the dark and dismal story. The lives of medical men are not unfrequently sacrificed in the honourable discharge of their calling. One is cut off in the full strength of manhood, the victim of acute disease contracted in the struggle with an unseen foe; another fades before his time, withered by incessant toil and never-ending strain: but each alike passes to his well-earned rest in peace, amid the goodwill and blessing of those whose sufferings he has alleviated, and happy in the assurance of having gained the admiration, respect, and gratitude of his fellow-creatures, and in all else that makes the remembrance dear. Such an end, however, was not reserved for him who is the subject of this painful episode in the history of our profession.

It appears that the late Dr. WM. WHITFIELD EDWARDES, having successfully completed his student career by taking the diploma of the College of Surgeons, the licence of Apothecaries' Hall, and the degree of M.D. of the University of Brussels, first settled in practice as the partner of Dr. ANDREWS, of Oakley-square. With a view to improving his position, he removed to Hounslow in October, 1881, where he joined Dr. WHITMARSH, paying for his share in the firm £1800. For a time matters seem to have run smoothly between Dr. WHITMARSH and himself, but that their professional relationship became strained is proved by correspondence put in at the inquest.

Now, Dr. WHITMARSH had been attending a young woman named BIGNELL for a complaint which he alleged was not hysteria. Dr. EDWARDES was afterwards called in, in place of Dr. WHITMARSH, because, as Mrs. BIGNELL states, he was kinder and paid more attention to his patients. This must be borne in mind when considering the charge she subsequently brought; so also must the fact of her imperfect education, as shown by the composition of the letter containing that charge; for whilst the former points to the possibility of her being over-sensitive, and thus liable to lay undue stress upon Dr. EDWARDES's behaviour, and even to put an unwarrantable interpretation thereon, the latter would go some way in extenuation of blame for an allegation that had no real foundation in fact. A person of her social position would be unable to realise the enormity of the statement, and to measure justly its inevitable consequences.

Of the charge itself there are four alternative explanations. 1st. That it was true in substance and in fact. 2nd. That it was a reckless, base, and deliberate falsehood. 3rd. That it was the false conclusion of a morbid mind—a conclusion drawn from acts that in themselves were pure and seemly. 4th. That it was a simple hallucination. We cannot think it was the last, for the main terms of the indictment were consistently and persistently adhered to by Mrs. BIGNELL throughout; nor the first, for there was nothing in the collateral evidence to strengthen and support her bare statement. We are constrained to believe the third—namely, that strictly proper professional behaviour was misconstrued by one whose temperament was unevenly balanced—call it hysterical or not.

Sympathy naturally leans to the victim, and rightly so, for his reputation remains sullied by the accusation, even though legal exculpation and redress be obtained. Moreover, with his death the chief source of establishing his innocence disappears, and since beyond doubt such charges are sometimes levelled against unsuspecting and innocent persons, the popular feeling acts as a deterrent against their frequent occurrence. The communication of the contents of the damnatory letter to Dr. WHITMARSH and the assistant, Mr. GARRETT; the interviews between the members of the firm on the one hand and Mrs. BIGNELL and her friends on the other; the retractation and apology, and the reiterated assertion of the truth of the libel, are matters of history. Apart from the truth or falsity of the accusation, Mrs. BIGNELL was practically compelled to maintain her own innocence and Dr. EDWARDES' guilt, otherwise she would have stood self-convicted and in dread of a legal prosecution. We cannot think that Dr. EDWARDES had any other course open to him than to push the investigation to its legitimate issue, for the retractation and apology were valueless in the absence of an explicit renunciation on the part of Mrs. BIGNELL. Nor can we see that he exhibited meanness and treachery in keeping from his accuser the course he intended to pursue in order to clear his reputation from the foul stain that rested upon it.

We come now to that stage in the sequence of events which immediately preceded the climax of the tragedy—the meeting at Dr. WHITMARSH's residence of what we cannot help describing as an extraordinary assemblage. There was Dr. WHITMARSH, Mr. GARRETT the assistant, Dr. EDWARDES the accused, and Mr. LAY the solicitor, who had been instructed by Mrs. BIGNELL to apply on the following morning for a summons or warrant for an indecent assault against Dr. EDWARDES. It is only fair to Dr. WHITMARSH and Mr. LAY to state that, according to the former, it was Dr. EDWARDES who suggested that Mr. LAY should draw up overnight a deed of dissolution of partnership upon the following terms—that Dr. EDWARDES should give up all his rights in the firm on the consideration of his receiving the sum of £500, or a little more than a fourth of the amount that had been paid for the same fourteen months before. Upon the fact as to where the offer of £500 was made, the evidence is most conflicting. On the one side is the dying declaration of Dr. EDWARDES and the sworn testimony of his widow, on the other that of Dr. WHITMARSH and Mr. GARRETT. To say the least of it, it was unfortunate, and to our mind irregular, that the intending prosecuting solicitor should have been present at the interview between Drs. WHITMARSH and EDWARDES, and that he should have joined in the conversation relative to the terms of the proposed dissolution. The assent of Dr.

EDWARDES to such a procedure, silent or expressed, ought not to have been taken as a justification.

That Dr. EDWARDES believed, rightly or wrongly, that he was the victim of duplicity and treachery, cannot be doubted. He may have exaggerated the grounds of his belief, or even drawn an illogical inference, but we fail to see the reasons for the assumption that he was the subject of "insane delusions." His madness had too much method for that. No doubt he over-estimated the consequences that would follow on conviction, and the doom assigned to a blighted reputation, but he had before him the pitiful spectacle of a ruined home, and the misery of those who were dearer than life. All this appeared with tenfold terror to a mind shaken by continued worry and sleeplessness. He knew the enormity of the "rashly importunate" act he was about to commit, but he was unable to restrain himself from its execution. It was a madness of the will. What makes the event so infinitely distressing is the fearful imprecation launched in those dying words.

There is little to be said upon the verdict of the jury; it was the only one that could have been reasonably expected. It is a matter for regret that the inquisition should have been carried on amid the popular frenzy that surrounded and invaded the Court; but we venture to say there is nothing to indicate that any one member of the jury showed the slightest dereliction of duty—that he did not apply himself to his task with honesty and fearlessness, and weigh justly and dispassionately the evidence before him.

In the effort to arrive at the approximate truth of the whole affair, the public and the profession must bear in mind that there are two distinct matters for investigation—Was Dr. EDWARDES in any way legally or morally guilty of the charge laid at his door? Did Dr. WHITMARSH foster and encourage the prosecution, or persecution, as the case may be? Did he, in fact, unscrupulously strive to take a personal advantage of his partner's hour of trial, and make his lot too hard to bear? In a case like this, where the direct statements of witnesses are well nigh certain to be widely at variance, circumstantial evidence, though falling short of absolute proof, rarely or never leads to a wrong conclusion. The entire surroundings of each phase of the inquiry have to be noted, carefully weighed, and apportioned their due share in the scales of opposing testimony. And in doing this Justice does not refuse to recognise and lay great stress upon the antecedents of those who have vital interests at stake, and she allows their credibility to be challenged and examined.

Previous to this painful affair both the professional and social status of Dr. EDWARDES were without reproach, and from personal knowledge we can affirm that we knew of no one less likely to sacrifice or jeopardise one or the other; and overwhelming proof must be adduced before he can be considered as having forfeited his fair name and fame. Of Mrs. BIGNELL and Dr. WHITMARSH, suffice it to say that at the least neither of them had previously been altogether fortunate and happy in his or her individual transactions.

Dr. DIPLOCK is to be complimented on his brief and temperate summing up. He must have been pained beyond measure at having to preside over this distressing trial—for trial it was; and although we regret with him that he had to carry his investigation beyond the inquiry into the cause of death, we do not see that he could have acted otherwise than he did. Had he refused to admit evidence on the side issue it could only have been tendered in a superior court. It would be a distinct advantage if the law were altered in accordance with the above-mentioned limitation of procedure before a coroner. We need scarcely advert to the advisability of examining females in the presence of a third person. In many cases it is impossible to carry out the rule in practice, but still it should be done wherever feasible.

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THE Illinois State Board of Health, which has to grant certificates to practise medicine within the precincts of that State, has just issued an interesting Report on the Medical Colleges of the Union and of Canada. By the State regulations, these certificates to practise are to be issued only to persons presenting diplomas from medical colleges of "good standing"; and as complaints had been made as to the practice and status of certain colleges, a committee was appointed to determine the requirements and characteristics which constitute "good standing" in a medical college. This committee instituted inquiries into the curriculum and facilities for teaching, the requirements for graduation, fees, &c., of all the colleges in America and Canada, and received official information on all these points, as well as many expressions of opinion as to needed improvements. The standard by which medical colleges are henceforth to be judged in Illinois is certainly none too high. We may summarise the conditions which must be fulfilled as—1. A preliminary examination in arts. 2. Instruction in anatomy, physiology, chemistry, materia medica and therapeutics, medicine, pathology, surgery, obstetrics and gynæcology, hygiene and medical jurisprudence. 3. Attendance upon two full courses of lectures in different years, each session to extend over five months or twenty weeks at least. 4. Regular attendance upon lectures and "quizzes." 5. The final examinations on all branches to be conducted by other competent examiners than the professors in each branch. 6. Dissection during two courses. 7. Attendance during two terms of clinical and hospital instruction. 8. Professional studies to extend over a period of three years, including the time spent with a "preceptor." As judged by this standard, eighteen medical colleges are rejected, and their graduates will no longer be able to obtain certificates to practise in Illinois, five are accepted "conditionally," and ninety-nine are accepted unconditionally.

The most striking fact elicited by this Report appears to be that America is, at any rate, provided with a sufficient number of institutions where students can be taught and graduated in medicine. At present these amount to 110. No fewer than fifty-six others were set going, and, after a more or less successful course, have now become extinct. In Canada nine schools have been established, and are all still at work. Every medical school in the States must possess a licence to teach medical sciences from the Government of the State in which it is situated; and if power to grant degrees is required, a further licence from the same authority has to be obtained. The freedom with which these licences have been distributed is one of the chief factors in the origin of the multiplicity of schools; and the mere fact of the decay and extinction of such a

large proportion of the schools started is quite as striking a proof of the little discrimination with which the power of granting licences has been used, as are the unsatisfactory provisions for proper teaching and deficient requirements for graduation at some of the colleges. The short life of some of the schools is also evidence in support of the view that such institutions were started with some purpose other than to supply a real want of facilities for medical education.

A consideration of the points in which the American colleges differ from our English schools does not show that they are in advance of us. In a very large proportion, students are admitted to their medical studies without having to pass any examination in general knowledge, or without giving proof of having received a sound general education. This is rightly considered by the Illinois Board as a serious omission, and care is taken to show that nothing is more important for real success in medical studies and practice than a well-trained and well furnished mind. We believe that this omission on the part of so many of the American colleges results simply from the pressure of competition. Many of the better institutions refrain from enforcing an entrance examination on their students lest they should be driven to the inferior schools, and so be set free upon the American public worse trained than at present. It seems that the principle of liberty has been carried too far here, and that the need of a responsible central controlling authority to insist upon such an examination being held in all cases is distinctly proved The period of study, too, is shorter in America than with us. In Canada this is not the case; the curriculum there extends over four years in all cases, and in one college—the Trinity Medical School, Toronto—over four and a half years. In America the period of study is three years, and when we add that one year of these three years devoted to medical study may be spent with a "preceptor," no further proof is needed to show that the training at the colleges must be so hurried as to lack thoroughness and a truly practical nature In accordance with this we find to a large extent attendance upon "clinics"—clinical lectures—stands in place of daily attendance upon hospital wards, while in the regulations for graduation there is a conspicuous absence of any law requiring the holding of such posts as those of dresser and clerk. It is, however, only by such work that our students learn many of the minor but very important details of medical and surgical practice. Similarly, instruction in practical physiology and histology, and a complete course of dissection, are not insisted on in the majority of these schools. Judging from the facts before us, there is no dearth of lectures, to which the long-suffering students must be subjected the livelong day; but there seems to be a serious want of thorough practical instruction. We are aware that this is made up to a large extent by studies carried on subsequent to graduation, but these are all voluntary on the part of the student, and undertaken only by the more fortunate minority, and we are looking only at the means provided for the general run of the men entering the profession. The last special feature of these "colleges" is that almost without exception they are graduating as well as teaching institutions, and that the lecturers and the examiners are identical. There is much to be urged in favour of allowing the teachers to have some voice in the granting or withholding of diplomas to their pupils, but while admitting this, we cannot but think that the rule of leaving this responsibility *solely* in the hands of the teachers is bad for all concerned, and capable of serious abuse. We believe that none are more ready to admit these deficiencies in the medical education of America than the most experienced teachers and practitioners. But to remedy it is by no means easy. Any individual effort in this direction which would be attended by increase in the expense and difficulty connected with taking out a medical qualification, would only have the effect of lessening the number of students at that particular college. Any hearty union for this end between the various competing colleges is almost beyond hope, while, even were this secured, there would be no protection against the establishment of new institutions in which graduation would be made temptingly cheap and easy. Some controlling power is needed to insist on a certain standard of teaching and examination—some body that can enforce the institution of a preliminary examination, an extension of time of study, and the acquisition of knowledge by personal observation on the part of the student, rather than by feats of memory. This is contrary to the prevailing spirit in the great Republic, but the nomination of this Committee by the Illinois State Board of Health is evidence that the question is exciting attention, and that the solution of the difficulty will be sought for in applying pressure to the teaching institutions from without. In considering critically the medical as all other institutions in America, it is important to bear in mind the short history that country possesses. On all hands it bears the impress of youth, of the failings as well as of the virtues and powers of juvenescence. It is not wise to expect the result of the growth of ages in a Republic of quite recent development. Considering the enormous and rapid growth of this great country, a fact unprecedented in history, the difficulties presented to those who have had to train a sufficient body of medical practitioners have on the whole been overcome with wonderful success. And while now it is easy to point to flaws in the medical education there provided, we may be sure that these will be speedily remedied. And as a set-off to any depreciatory considerations suggested by the Report before us, can always be cited the undoubted fact that in no country is the profession held in such general high honour and esteem and treated with so much confidence as in America; and this is the highest reward ever aimed at by honest practitioners, and the best evidence of their real worth.

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THE case of ROBERT SANSOM, aged twenty-two, a constable of the I Division of Police, Kennington-lane, has attracted, and properly so, a good deal of public attention. It is very much to the credit of Dr. BLADES that all the essential facts of this attendance may be gathered from his own candid and transparent statement before the coroner. The attendance extended over the short period of five days. Dr. BLADES had never seen SANSOM previous to Christmas Eve, Dec. 24th. On the 29th he sent him on a suitable ambulance to St. Thomas's Hospital, that he might have the benefit of better quarters and proper nursing, which could not be had at the police station, where fourteen or fifteen constables slept in the same room—a room without the least convenience for the sick, not to say for a dying man. Seven hours after SANSOM had reached the hospital he died. The case is full of medical

as well as police interest, and we may well recall the principal points of it.

There is some discrepancy in the accounts of SANSOM'S colleagues as to his appearance and condition. Police Constable FLYNN, who saw him on his rounds on Sunday night, the 24th, said "deceased told him he felt so weak he did not know what to do." But, on the other hand, Sergeant KING testified that the deceased came up to him on this night, shortly after a disturbance with some roughs, and "reported himself all right." Again, at two o'clock on the morning of Tuesday, the 26th, according to Inspector DAVIES, the deceased called at Kennington Police Station, and "reported himself all right," after doing seven hours' duty. But, on the other hand, Police Constable AKERS says that on Tuesday, about seven o'clock in the morning, deceased complained of being very ill, saying that he could not sleep, as he was so weak. Notwithstanding his brave attempts to go his round and his reporting himself "all right," it is clear that he was weak and ill enough to excite the notice of his colleagues.

Let it be said here that the case is one of many in which the observations of a man's fellow-workmen are worth very much to the doctor, who may easily be misled by seeing a patient only infrequently and under favourable circumstances. Dr. BLADES saw SANSOM for the first time, we have said, on Dec. 24th. SANSOM called at Dr. BLADES' surgery, and this of itself was not suggestive of serious illness. Dr. BLADES thought him bilious, and prescribed accordingly. He directed the patient to come again on the Tuesday, when he could have more medicine, "without being put on the sick list. He could not let the deceased go sick." Dr. BLADES did not see the patient again till the Wednesday, when he saw him in bed at the station. On the morning of this day Inspector PEAKE observed to the Doctor that the deceased was losing flesh. Dr. BLADES would have examined the patient thoroughly, but as there was a number of other men in bed in the room, he wished him to come to his house, thinking it would do him no harm. But at 6 o'clock Sergeant WILLIAMS left word at Dr. BLADES' that he was not well enough to come. It was not said that he was worse. Dr. BLADES examined the patient carefully on the Thursday for typhoid fever, for jaundice, and for other diseases, but he could not satisfy himself of any particular affection. He told Inspector PEAKE the case was obscure, and that he must watch. He ordered medicine to be sent for and mutton broth to be supplied. Unfortunately both of these orders were forgotten, and SANSOM received nothing. On the Friday Dr. BLADES found the man dangerously ill, and advised his removal to St. Thomas's Hospital, where he died on the same day. Diabetes was discovered to be the cause of death.

We have no intention to be too lenient with Dr. BLADES for not ascertaining the nature of this painful case; but those who know most about the matter will be least hard upon him. Though it is within the lines of recorded cases of acute diabetes in young subjects, the case is by no means a common one, and medical men will judge the oversight more mercifully than the public. We will venture to say that few medical men have known a case of diabetes fatal within five days of the first application for medical advice. It is to be regretted that after carefully excluding typhoid and cholæmia, and seeing that he had a serious case to deal with, he did not subject the urine to the great tests which daily experience shows to be so valuable either in disclosing hitherto unsuspected conditions or in excluding them. Having said this much, we would caution others against being too severe. Perhaps Dr. BLADES, in such a room, with no accommodation for the sick, had not even the urine to examine. There has been much unduly censorious criticism of this case, and not a few inaccurate statements have been published which have received explicit contradiction. There are critics who never make mistakes and are never guilty of oversight; let them cast the stone. Acute diabetes is rare enough to explain, if not to excuse, a medical man acting as Dr. BLADES did.

Still the death of Constable SANSOM has one or two serious lessons. The first is to practitioners—to be exhaustive in investigating an obscure case, and never to rest till the great renal tests have been used. The second is one that is wider in its bearings. It seems to us not only right and most urgent that where an organised arrangement is made with a medical man for attendance on a large body of persons, provision should also be made for the medical man, or for the patient, in difficult or obscure cases, to have the benefit of another opinion. We think that even paupers in our great workhouses, with all their pains and diseases, should have this advantage. But it is obviously only right that all paying and provident arrangements for medical attendance should include provision for two opinions. What a satisfaction it would have been to Dr. BLADES and to his patient and all the patient's companions to have had an appeal. The judgment of one man, however acute, can never be enough for every case. The best medical men would be glad to compare notes with a colleague. And from the policeman's point of view it is most reasonable that where his disease is obscure, or possibly his *bona fides* suspected, he should have the benefit of a consultation. We do not think that the remedy for such cases as SANSOM'S lies in having police surgeons who shall attend nobody but policemen. This would be a very doubtful advantage to the force. But we think that the system of medical attendance should provide an appeal in an easy way, and that in every police district a second medical officer, a man of acknowledged standing, should be appointed for reference in all cases where the patient or the divisional surgeon is so disposed.

The case conveys another lesson to the authorities—the absolute want of accommodation at police stations for a sick policeman. It is probable that had there been a sick ward at this station, with a few common appliances for detecting and treating disease, and a nurse to wait on the sick, the facts of the case would have been ascertained by Dr. BLADES.

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THE nature and origin of tumours have always excited keen interest since the microscope has deepened and extended the range of vision of the pathologist. Nor is this surprising, for there is no region of pathology in which minute anatomy is of more direct practical importance. Nor is there any department of morbid histology which has been better worked. We now know as much of the structure of new growths as we do of any even of the normal tissues of the body; and yet the greater problem of the

origin of tumours is still enveloped in a mystery which has been scarcely lessened as a whole, and nowhere dissipated altogether, by the labours of several generations of pathologists. It is a subject in which facts are few and hypotheses are for the most part without the range of verification.

One theory regarding the origin of new growths, proposed a few years ago by COHNHEIM, has excited considerable attention. It suggested that in the early stage of development of the organism more cells are formed in certain situations than are required for the formation of the definite organs and tissues. The consequence is that some of these cells remain, so to speak, unused. Their number may be small, but they possess their embryonic character and capacity for development. The newly born child comes into the world not with the new growths, but with cell material in certain situations, from which, under favourable circumstances, new growths may arise. The conditions which determine the development of this material into definite tumours may consist in part in the activity of certain organs at different periods of life. For instance, the time of the development of growths in the organs concerned in generation may depend on the influences of pregnancy and menstruation. Various attempts have been made to discover evidence for and against this hypothesis. If it were correct, the organs of the fœtus or newly born child may be expected to yield evidence, at definite points, of a perverted development of the embryonal material, as, for instance, in places in which epithelium of one type passes into that of another. These have not yet been discovered. Secondly, attempts have been made to ascertain, experimentally, whether embryonal elements introduced into the tissues of the adult do actually undergo development. The chief evidence hitherto produced has been of the latter character. The experiments of COHNHEIM and MASS have shown that masses of cartilage introduced into the system may grow in new situations, and those of LEOPOLD especially seem to prove that such cartilage possesses a capacity of development far greater than that of the adult tissue. He introduced particles of cartilage into the lungs by injecting them into the jugular vein, and also implanted them in the anterior chamber of the eye, and found that when the cartilage came from adult animals, absorption gradually took place, or, in the most favourable cases, merely persistence of the cellular elements in an unchanged condition; but when, on the other hand, fœtal cartilage was employed, it grew and developed to an actual chondroma. In a recent number of the *Centralblatt für die Wissenschaften* LWOFF has described a series of experiments, eighty in number, which confirm in the main the accuracy of LEOPOLD'S results. The observations were made on rabbits, dogs, and guinea-pigs. Fragments of cartilage, periosteum, &c., were taken from fœtal animals in various stages of development, for the most part towards the end of pregnancy. These were introduced into the anterior chamber of the eye, the jugular vein, the peritoneal cavity, and the subcutaneous cellular tissue. In the last two situations, also, were introduced fragments of other tissues, and even entire organs, as the paw, leg, heart, spleen, uterus, and fragments of skin. The experiments in which the tissues were introduced into the peritoneal cavity or beneath the skin failed to yield any definite result. Those in which the tissues were introduced into the anterior chamber of the eye or into the lungs, by means of the jugular vein, were more successful. It is remarkable, however, that whenever the material was obtained from a very early fœtus, the tissue underwent slow absorption, and at the end of a month had completely disappeared. Positive results were obtained with tissues from the fœtus in the second half of pregnancy, or from newly born animals, and in each case a similar capacity for development was observed. When the tissue came from an animal of the same species as that into which it was inoculated, it quickly began to grow, and underwent transformation of structure, so that from cartilage true bone was developed, and from periosteum both cartilage and bone. The growth did not, however, continue long: it soon ceased, but the new formation underwent no absorption or regressive metamorphosis as long as the animals remained under observation. When the introduced tissue was obtained from an animal of a different species, growth progressed for two or three weeks only, and was slight in degree, and then, in about a month, the tissue became absorbed. The fragments of cartilage underwent, for the most part, a mucoid transformation, sometimes with a development of connective tissue instead of cartilage. It must be confessed, however, that these experiments do not go far in the direction of proof of COHNHEIM'S theory. That tissue introduced in a certain part of the body may undergo growth there, does not afford evidence that tumours actually arise from residual embryonic tissue, scarcely even proves the possibility of such an origin—a possibility, moreover, which no one has called in question. On the other hand, the fact that the more embryonal the tissue, the less readily does it develop, is unquestionably opposed to COHNHEIM'S theory, or at least furnishes a new difficulty for its advocates to explain away.

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IT is a matter for great thankfulness that the impecuniosity of London hospitals is at least being made public, and that light is being thrown on it from various quarters. One authority has one explanation, and another has a different one. As the theories of the causes of the starvation of hospitals differ, so do the remedies. But it will be a real public advantage if, before the deluge of Parliamentary oratory sets in, our lay contemporaries will give prominence to the fact that hospitals, which have been the boast of Christianity, are being starved in the wealthiest metropolis of Christendom. This fact is not more awkward for hospitals than it is for Christianity We gave prominence to it, as well as to several striking illustrations of it, in June last, in anticipation of the Hospital Sunday Collection. The facts are now so well known as not to need repetition. We will content ourselves with recalling two or three which we published then. The London Hospital, which has to contend with the sick poverty of the East of London, has an expenditure £26,000 short of its reliable income. St. George's Hospital has an annual deficit of £6521, and in the last two years had to sell £16,800 stock. The Middlesex has an annual excess of expenditure of £10,066, and had to sell stock to meet expenses. University College Hospital has an annual excess of expenditure averaging £6385, and in the three preceding years had to part with £14,094 of its invested capital. Mr. BURDETT has tried to show that the special hospitals are

better off. But it was a part of our statement in June that the Royal Ophthalmic Hospital, the oldest ophthalmic hospital, and certainly one of the best, in the world, complained of a decrease of income of over £2140 last year as compared with 1879. It may be that the special hospitals, which are the younger institutions, are more full of the activity of youth, and are not ashamed to beg. But it is useless to blink the fact that the hospitals of London are not being supported, and that their committees will be compelled to curtail the number of beds or even of wards still further than at present unless something is done. What shall that something be, and by whom shall it be done? Many look to the Government, and expect much from a Royal Commission. The Government will certainly have to take the hospitals into their care if private benevolence does not soon respond to the complaints of those who are expected to make bricks without straw, and to make beds for hospital patients without being supplied with funds. Hospitals cannot be dispensed with. To the poor and the sick they are invaluable. But the case is very urgent, and we cannot but believe that if it were placed before the wealthy classes with care and system they would still be ready to lend a helping hand. The wealthy classes of to-day are not identical with the wealthy classes of twenty years ago. There has been a great transference of wealth. The commercial classes in London have not been brought into close contact with hospitals as they are, and as wealthy county families are, in the country. The authorities of hospitals have themselves partly to blame. They are so conscious of the greatness and goodness of the work they do, that they do not sufficiently consider how private and quiet it is, and how little it impresses those who are outside unless distinctly and pointedly brought to their notice. The only way of giving such notice to the outside public which occurs to the member of a hospital committee is a dinner, which is a great bore to the charitable, and which itself consumes half the money which ought to go to the hospitals and a great amount of the energy of the members of the committee. Our reason for thinking that there is plenty of benevolence and plenty of wealth too for the support of hospitals, is that in answer to our own and other earnest appeals last June the Hospital Sunday collection exceeded by two thousand pounds any previous collection.

It appears to us that the Hospital Sunday Fund might at this crisis, and with the Government overwhelmed with arrears of work, take some action in the way of bringing the hospital committees into contact with each other and with the wealthy classes. It is to be feared that there is too much rivalry between institutions having the same object. This might be controlled by the influence of a central body having only the general interests of the sick poor at heart, and the Hospital Sunday Fund might easily become such a central body. One advantage of its doing so would be to destroy the notion that a contributor to a mere annual collection discharges the debt the wealthy owe to the hospitals and dispensaries of London. Such a central body, too, in possession of all the facts of the case, would make short work of another delusion that has damped charity—viz., that there are abuses in hospital administration which excuse the withholding of subscriptions. That there are defects and abuses we admit; that they are such as to justify the starvation of the hospitals we utterly deny. It is notorious that some of the most meritorious hospitals in London are the most straitened. The Hospital Sunday Fund represents the City through the Mansion House, and it represents the Churches of the metropolis without distinction of creed. It would be difficult to get a hospital council that would have a better chance of doing the work, if it could be induced to undertake it.

# Annotations.

"Ne quid nimis."

## THE PREMIER'S SLEEPLESSNESS.

THE sleeplessness that affects persons in the pathological—or perhaps we should say physiological—condition under which the Premier laboured for some time before he left England, ought to be described as *wakefulness*. It is inability to "go to sleep," or, if that be practicable, to sleep for any considerable period. Although there is no longer any room to doubt that the hypothesis of cerebral anæmia as the *cause* of sleep is erroneous, it is certain that a vaso-motor change, involving contraction of the arterioles, must occur, and the reduced calibre of these vessels must be maintained, if sleep is to be general and complete, or, in other words, healthy. A lessening of the volume of the blood circulating in the cortex of the cerebrum must take place; or when the heart slows its action, reducing the number of its pulsations some eight or ten per minute, as in health, there will be, first, a state of the blood-current in the capillaries approximating to the oscillation of congestion; and, second, the heart, finding there is something amiss in the cerebral arc of the periphery, or, in scientific language, being reflexly irritated by the abnormal condition of the arterioles, will renew the more rapid rhythm of its pulsations proper to wakefulness. It is the vaso-motor system, or centre, which is at fault in a case of this class; and the fault is neither a simple one nor easily remediable. Narcotics would be inadmissible; at least, the only purpose for which they could be employed would be that of breaking a morbid habit, and if a very brief exhibition of remedies of this nature did not effect the limited object in view, they would have to be abandoned. The physiological fault is twofold: the organs of special sense are not disposed to sleep simultaneously, and the vaso-motor centre is not so responsive to the call of any one somnolent sense-organ, or part of the cerebrum, as to reduce the supply of blood, and, as it were, *compel* the cerebral centres of consciousness to take their physiological rest. The morbid state it is required to treat, is, in fact, a curious combination of weakness, irritability, and, in a sense, inordinate, and therefore wasteful and exhausting, energy. The best of possible courses has been taken in giving Mr. Gladstone the threefold advantage of: that *change of work* commonly miscalled "rest," change of climate and atmosphere, and change of scene. The plan of treatment adopted is eminently wise, and we not only hope, but confidently anticipate, that the scientific purpose will be effected. It is not reasonable to expect that the trouble will be immediately relieved. There must be a considerable gain of nerve-strength, and some replenishing of the exhausted "reserves" of nervous energy, before the organism will again perform its functions with rhythmical integrity. Neither the patient nor his friends should be discouraged if there be some little delay in realising the full benefits of the thorough change which has been judiciously recommended. Our only fear is lest, even in his retirement, the much-esteemed Prime Minister should be too frequently reminded of home and its associations by the pardonable but inexpedient attentions of political and personal friends. It would be better

for them to leave Mr. Gladstone with the novel surroundings of a foreign land unbroken by remembrances of the scenes which he has quitted for a while, under medical advice, and to which he will return only too soon for his own health's sake. Those whose presence must needs recall thoughts, from which his mind ought for a time to be as clear as possible, would show their regard most gracefully by leaving the Premier at peace.

## WESTMINSTER SANITARY AID ASSOCIATION.

THE first annual meeting of this Association was held on the 23rd instant, and its principal objects were fully explained. It has been specially organised to prevent the spread of infectious diseases amongst the inhabitants of Westminster, and it seeks to carry this into effect by providing sanitary visitors who teach and carry out the practice of disinfection; by securing the removal of, or other best procurable means of isolation for, the infectious sick; and also by endeavouring to obtain the co-operation of school authorities and all existing sanitary agencies. During the past year the Association has met with 137 cases where their intervention was needed, 88 of these being scarlet fever; and, owing to the steps they have taken, the disease was in 44 cases limited to the first person attacked. The utility of such an Association can hardly be overstated, for much of the work it does, and can do, could never be effected by sanitary authorities. Thus, by the mere visits of the ladies belonging to the Managing Committee, and of their salaried visitors, an opportunity is afforded of imparting to the poor instruction as to the elements of health in the household, and a means of acquiring information as to the existence of infectious disease is obtained which is quite beyond the powers of the officers of a public authority. Certain measures can also be adopted with a view of preventing the spread of infection, which would otherwise never be acted upon. Thus, children with ringworm and allied affections are prevented from going to school; pecuniary aid is afforded in households where, in consequence of scarlet fever or small-pox, it is necessary in the interests of the public to sacrifice a means of livelihood, such as tailoring; and recently a house has been procured to which single-roomed tenants can be removed during the disinfection of their homes and effects. There is, indeed, so much useful work for such Associations to do, both in Westminster and elsewhere, that we regard as nothing short of a scandal that the sanitary authorities do not on their part relieve them of all the duties which should properly be carried out at the public cost. Disinfection, for example, either of home or clothing, ought to be no part of the work of such a voluntary society, the more so as the Legislature has fully provided for its proper performance by the local authorities, all of whom ought to possess a staff for the cleansing and disinfection of infected rooms and an efficient disinfecting apparatus.

## THE MANAGEMENT OF THE METROPOLITAN FEVER HOSPITALS.

AT the last meeting of the managers of the Metropolitan Asylums Board a letter was received from the Prime Minister referring them to the Local Government Board, with regard to the intentions of the Government as to the future isolation arrangements for the metropolis, and the matter must now stand over until Sir Charles Dilke returns to England at the end of the month. A motion was also brought forward, the object of which was to censure the Board for having appointed Dr. Collie to act as visiting superintendent of the Hampstead Hospital whilst still maintaining the medical supervision of the Homerton Hospital. Sir E. H. Currie strongly maintained that the Board had acted wisely in securing to the Hampstead Hospital the experienced services of Dr. Collie instead of handing that establishment over to a newly appointed medical officer, "perhaps just fresh from college." If such an alternative had been necessary no one could have doubted the expediency of the step which was taken, and under any circumstances Dr. Collie's intervention on behalf of the Hampstead Hospital doubtless aided the managers materially in organising the medical arrangements of that hospital. But it is open to great doubt whether it is wise to employ the services of one medical superintendent in the control of two establishments of such magnitude and importance as the fever hospitals belonging to the Asylums Board. Directly a medical superintendent is compelled to hand over any important portion of his ordinary duties to a deputy, he practically and to that extent resigns his position as medical chief; whereas the more he is able to give individual attention to the details of administration and to the condition of his patients, the better it will be for the sick under his charge. Such an arrangement as was carried out in the case of Hampstead, and such as is evidently again contemplated, must necessarily involve the transference on the part of a medical superintendent of many of his more important duties to others; and though it may, as alleged, have been both economical and unattended with any marked disadvantages in this instance, yet in principle we believe the arrangement to be a very undesirable one. Having regard to the nature and extent of the interests involved, and to the number of patients received into each of the hospitals of the Asylums Board, the medical superintendents should, in our opinion, not be regarded as having sufficient leisure to undertake similar duties in a second hospital whenever an additional one is opened for the reception of patients.

## ORGANIC CHANGES IN NEW-BORN CHILDREN.

A GERMAN contemporary remarks that there is a certain deficiency of practical knowledge on the above subject, inasmuch as opportunities are scarce for observing with scientific accuracy the appearances indicating the changes going on during the first days after birth. Dr. Hofmaier of Berlin has recently published the results of his comparison of the urine of newly born children with that of grown persons. The quantity of urea he found to be greatest on the fourth day, being four times as much as on the first day, and double that which was observed on the eighth and ninth days. This fact he considers to indicate a maximum oxidation of the albuminous substances in the newly born organism on the third and fourth days, and a gradual declination of that process during the succeeding days. The proportion of uric acid is not easily defined, but it is asserted with more or less certainty that it reaches its greatest extent about the fifth day. The proportion of albumen would seem to increase simultaneously with the augmentation of the quantity of uric acid. Phosphoric acid and sulphuric acid were found by Dr. Hofmaier to exist in varying quantities. Detailed attention was paid by him to the loss of weight which children are subject to immediately after birth. Observations made with respect to thirty-four children showed a loss in weight in the earliest days of their life representing about 7½ per cent. of their weight at birth. The loss seems to have culminated about the beginning of the third day. He summarizes his remarks on the quantity of urine by saying that on the tenth day it is usually more than six times what it was on the first day. The colour is darkest and fullest on the third day, and then gradually returns towards the original shade. The specific gravity is increased in an important proportion by the third day, from which time it gradually diminishes again. In fact, the appearances referred to are considered to represent nothing more than the revolution which is being perfected in the newly born organism during the first days of life. The

amount of nourishment taken is not sufficient to make up for the amount of work thrown on the organs of the body, which are for the first time carrying out their functions, and a process similar to wasting from hunger is really going on. A question more or less cognate to the above subject is raised by Dr. Hofmaier in his remarks dealing with the effects on the child of the chloroform used in the interest of the mother. Out of twenty-two children whose mothers had been delivered under chloroform, not one had remained free from icterus (or jaundice), sixteen having been subject to it in a marked form, and six only slightly. On the other hand, out of thirteen children brought into the world without the administration of chloroform, only four had well-defined symptoms of jaundice, one had slight appearances of it, while the remaining eight were free from it. The observations made also prove that in the case of children whose mothers had been chloroformed, there was a larger proportion of urea, and the maximum quantity was attained twenty-four hours earlier than in other instances. The results thus described are attributed to the effects of the chloroform on the mother, and indirectly on the unborn child. It is recommended that this loss of weight and substance should be obviated as far as possible by the infant being kept at a uniform heat, and by a sufficiency of light nourishment, easy of digestion, being administered during the first few days, as the breast-milk is at that time usually deficient in nutritive properties as well as insufficient in quantity.

## INTEMPERANCE IN THE ARMY.

VERY recently Lord Wolseley, when on a visit at Witton Hall, received a deputation from the temperance societies of Blackburn, who presented him with an address of congratulation on his distinguished services and in recognition of the support given by him to the temperance cause. In acknowledging it, Lord Wolseley referred to the advantage he had derived from temperance principles in the Red River Expedition, when no spirituous liquors were taken with the force, and to the conduct of his personal body-guard in South Africa, composed almost exclusively of temperance men. Adverting to the late campaign in Egypt, he stated that he restricted as much as possible the issue of grog, but was obliged to allow it occasionally owing to the great pressure put upon him by the doctors. And although the men were exposed to many temptations, especially on entering Cairo, where there were grog-shops in every street, and some streets were almost exclusively composed of them, he never saw a drunken soldier during the whole time he was in Egypt. We do not doubt Lord Wolseley's statement, but we cannot admit it as evidence that drunkenness did not exist among the men. The reports of the various correspondents with the army and of many officers who served in the campaign forbid such a conclusion. We can only suppose that his Lordship was so busily engaged in his duties that he had no time to look for drunken soldiers. We fully concur with Lord Wolseley in the opinions he has expressed of the evils arising in the army from intemperance, which is really the cause of a very large proportion of soldiers' crimes; we also agree with him in thinking the issue of spirits to the troops, unless under special circumstances, to be unnecessary and often injurious; and we should be delighted to see temperance the rule of the army. But the returns for 1881, which we lately brought under the notice of our readers, prove too plainly that this is still far from being the case, the courts-martial and fines for drunkenness having shown a marked increase. We wish it were otherwise; but numerical results are more reliable than the observation of a single individual, and we cannot help thinking that Lord Wolseley attached too much importance to the negative evidence furnished by his personal experience under circumstances which must have precluded careful investigation. In his position as Adjutant-General of the Army he will have abundant opportunity of ascertaining correctly all the facts bearing upon this important subject, and we trust that he may turn to good account, in the way of improving the habits of soldiers, the influence and authority which his high position confers upon him.

## THE CHATEAU SCOTT.

IT can scarcely be said that Mr. Gladstone is residing at Cannes. The Château Scott is a good two miles from the town itself, and is situated on a much higher level. The site is certainly an admirable one, commanding to the west the town of Cannes and the Esterel mountains, while to the east it overlooks the Gulf of St. Juan and the snow-clad Alps. Few dwellings are within sight, and the gardens and grounds of the château measure more than 30,000 square metres. Palms, yuccas, banana trees, cactus, aloes, and many other tropical plants flourish in the open air round this elegant mansion, while the gardens are also ornamented with numerous waterfalls, fountains, and fishponds. However faulty the sanitary condition of Cannes might be, it would only indirectly affect the inhabitants of the Château Scott. For influencing the imagination, for cheering and relieving the mind, the views to be obtained from this beautiful spot could scarcely be equalled throughout the whole line of the Mediterranean coast; and Mr. Gladstone will find ample room for enjoying exercise and the scenery without quitting the privacy of his own gardens. The internal arrangements of the mansion are not, perhaps, so good as could have been wished, unless some very recent alterations have been made. The kitchen was narrow, dark, and ill-ventilated; and the drainage was carried out according to the primitive French system. The position of the building is admirably calculated to secure to its occupiers, and to the fullest extent, the benefit of the southern climate. Altogether, therefore, Mr. Gladstone is to be congratulated on his new abode, not the least advantage being the more stimulating nature of the air which its elevated position ensures.

## THE DISCOVERY OF THE DIFFERENCE BETWEEN TYPHOID AND TYPHUS FEVERS.

AN old controversy has been revived in the pages of a daily contemporary, the *Glasgow Herald*, arising out of some remark, let fall in an article in that paper upon Sir James Paget's lecture on New and Rare Diseases, that to Sir W. Jenner we are indebted for the discovery of the difference between typhoid and typhus fevers; whereupon, as on a similar occasion a few years ago, when Dr. Stewart was reminding the medical world of his share in this notable work, strong remonstrances were called forth from members of the profession in Glasgow, claiming the full credit of that discovery for the late Dr. Perry, whose son is well known as a physician in that city. It is complained that Dr. Perry's claims are always ignored, and that the custom has been to give Sir W. Jenner the sole credit. Murchison, however, our leading authority on this subject, has not ignored Perry's position, and distinctly points out that he taught the difference between the cutaneous eruption of the two diseases, although he believed that the intestinal lesions were found in some cases of typhus. Dr. Stewart, who was a student in Glasgow in 1836, when Dr. Perry advanced his new views, has, however, pointed out that the distinctions were not clear and precise, so that he determined to investigate the subject for himself, the result being his paper published in 1840, in which he goes thoroughly into the points of difference; Dr. Gerhard of Philadelphia having a few years before written in the same sense. Other pupils of Dr. Perry

maintain that he was very precise in pointing out the distinctions, and his facts, at first disbelieved, were investigated by a committee, which reported upon them in corroboration of Dr. Perry's statements. Notwithstanding the writings of Perry, Gerhard, and Stewart, the medical world certainly did not thoroughly appreciate the complete non-identity of the two diseases until Sir W. Jenner proved conclusively, not only their anatomical and clinical, but their etiological differences, in his paper communicated to the Royal Medical and Chirurgical Society in 1849, upon the "Identity or Non-identity of the Specific Cause of Typhoid, Typhus, and Relapsing Fever." That is the reason why Jenner's name has, and always should have, a prominent place in the history of this subject; he established the fact that these diseases were specifically distinct; and had no connexion whatever with one another. In recognising his claims there is no desire to ignore those of Dr. Perry, who will still remain acknowledged as the first to discriminate between the fevers which had been so long confounded, but who did not prove his point in the conclusive manner that Jenner did, without whose investigations there would have been still the same confusion between the affections which the term "typhoid" tended so much to perpetuate.

## SANITARY INSPECTION OF HOUSES.

IT is very satisfactory to find the subject of the health-destroying condition of too many of our dwelling houses attracting the attention of the public. Last week a paper on the subject of sanitary inspection was read at the Society of Arts by Mr. W. K. Burton, illustrated by drawings showing the defective system of drainage too often employed, and by specimens of apparatus in use for excluding sewer gas, but which instead of excluding were really the means of introducing it into dwellings. The necessity for efficient skilled sanitary inspection for the detection and removal of such factors of disease may be estimated by the fact stated by Mr. Burton, that of 595 houses inspected during the last two years by one of the societies to which we recently called attention, 68 per cent. were found defective in important particulars; in 37 per cent. direct communication existed between the drain or soil pipes and the drinking water cisterns. If this may be assumed to be anything like the average condition of the houses in London, it is a matter for surprise not that typhoid fever exists, but that it is not the cause of a much higher rate of mortality. Mr. Burton pointed out the modes in which these defects of house-drainage could be best detected, and the conditions which are necessary to ensure a perfectly drained house. In the course of the discussion which followed, Mr. Rawlinson called attention to a matter which, we fear, has a material and injurious influence in preventing the more general adoption of sanitary inspection and improvement—the heavy expense necessary, in some cases, to remove the sanitary defects and render the house a healthy home. Although we agree with him that nothing can be more foolish than to save money at the expense of health, yet there is something to be said for tenants with limited incomes hesitating to incur a heavy outlay upon the property of another when they are not convinced of its absolute necessity. It would be very advisable on the part of those associations which have been instituted to promote the sanitary improvement of our dwellings to make a distinction, in their reports upon houses, between works which are imperatively necessary from a health point of view and those which, though advisable, may be delayed or omitted. For while it is desirable that every precaution should be taken to prevent disease, many persons would make a great effort to carry out improvements of the first group who would hesitate to incur liabilities on account of those of the second. We cannot but think that some of the reluctance to take advantage of a system of sanitary inspections arises from the fear of being overwhelmed with the amount and expensive nature of the changes likely to be recommended. The adoption of some such classification of measures as we have suggested, and an assurance that the necessary works would be effected in as inexpensive a manner as may be consistent with efficiency, would, we doubt not, have a beneficial influence alike in the interests of the associations and of the occupants of the houses to be inspected. The profession is now thoroughly alive to the importance of the prevention of disease and the value of good sanitary arrangements for the preservation of health, and we have no doubt they will take advantage of every opportunity to impress upon heads of families the duty of a careful attention to house sanitation and the benefit to be derived from judicious skilled sanitary inspection.

## A DISEASE FROM REEDS.

A CURIOUS affection has been occasionally met with in certain parts of France, especially in Provence, among reed-workers, chiefly those who manipulate the stems of Arundo donax. A case at Frontignan (Hérault) has lately been very carefully studied by M. Baltus of Lille. A man, aged forty-seven, and his son, aged seventeen, had been at work for several hours loading a cart with reeds, which had been cut a year before, and kept in a damp trench. Both were seized with painful irritation of the nose, eyes, and throat, followed by erythematous swelling in the same parts, which extended to the hands, trunk, and genital organs. A number of acuminated pustules appeared on the red swollen areas, the conjunctivæ were injected, the eyes streaming, and there was a slight cough. The next day four other persons—three adults and a child—who had come in contact with the reeds deposited at the farm, presented the same symptoms, although in slighter degree. Moreover, four cats and three dogs which had frequented the same reeds presented red painful crusts about the nostrils. In every case the disease ran a mild course, and disappeared in a few days, under the influence of wet compresses. An examination of the reeds showed that they were covered with a mould consisting of the spores and mycelium of a fungus, Sporotrichum dermatodes, which had developed under the influence of the prolonged exposure to moisture. The spores had been shaken off as dust during the manipulation of the reeds, and had irritated the exposed parts of the skin on which they had lodged. Although usually trifling, the malady may sometimes assume a severe form, lasting nearly a fortnight, and has been known to cause the death of an old man seventy-one years of age. It may apparently be prevented by the simple expedient of washing the reeds before their manipulation.

## A NEW SERIAL ON INFANTILE PATHOLOGY.

UNDER the title of *Archivio di Patologia Infantile*, Professor Luigi Somma of Naples has just issued the first number of a bi-monthly periodical, specially devoted to infantile pathology. The editorial staff includes no less than twenty-five professors and practitioners in various universities and hospitals of Italy, France, Switzerland, and Germany. Amongst the clinical contributions in the first number are: one by Professor Monti of Vienna, on Spasm of the Glottis; one by Cuomo Massei and Tomma, on the Use of Pilocarpine in some Diseases of Infants; and a paper by Dr. Arena, Professor of Clinical Chemistry, on the Urine of Newly born Children in connexion with some of their Diseases. This publication affords another proof of the ability and enterprise which, in recent years, have characterised the periodical medical literature of the Italian peninsula.

## WATER ANALYSIS IN THE UNITED STATES.

AMONGST the special scientific investigations which have been carried out by the United States National Board of Health, is one relating to the value of chemical analyses in determining the amount of organic matter in potable water, and in deciding as to the specific effects produced on the health of individuals who drink waters variously contaminated; but, owing to the unfortunate failure of Congress to make proper financial provision for the department responsible for the health of the population, the report upon the subject has, in common with others, remained unpublished. Some results as to it are, however, recorded in the last Annual Report of the National Board, and they are as follows:—It is alleged that there is clear proof that loss of organic matter does occur during the evaporation of water prior to combustion of the residue by Frankland's method, contrary to what has always been claimed by Frankland. There is also evidence of a source of serious error in the determination of nitrogen by the same process, there being a notable gain of nitrogen from the atmosphere. Much fuller information than has hitherto been available has been obtained as to the extent to which definite substances belonging to various chemical classes, and including some of the known products of putrefaction, are attacked by potassium permanganate in acid and in alkaline solution. An extended comparison has been made of the practical results of the Frankland, Tidy, and Wanklyn processes, as applied to a series of waters from known sources, and of known sanitary character, also to waters artificially polluted with sundry forms of manufacturing refuse, and with forms of organic matter liable to be encountered in connexion with ordinary water-supply. Proof is alleged as to the error of the statement by Wanklyn that urea is not decomposed by treatment with alkaline permanganate in such a way as to yield so-called albuminoid ammonia. Results of the exhaustion or continued treatment of organic matter by the Wanklyn and Tidy methods, and results of biological experiments with waters which were simultaneously examined by chemical processes, are also available. It is certainly very much to be regretted that the results of these labours, which have been carried out independently by a series of scientific workers, chemists, microscopists, and others, should, for want of funds, be lying hidden away at Washington, especially when they relate to matters of such extreme importance to public health. Their publication would enable them to be critically examined by fellow workers in all parts of the civilised world, and the additional information thus obtained on the subject would be as valuable to the United States as to other countries. We would respectfully press Congress to reconsider its position in this matter.

## THE DISINFECTION OF TUBERCLE.

FROM current theories of the infective nature of tubercle, it naturally becomes exceedingly important to ascertain by what agents its virulence may be most effectually neutralised. A series of experiments on this subject have been communicated to the Académie de Medecine by M. Vallin. Fragments of tubercular pulmonary tissue removed from the body of a man who had died of phthisis were well mixed with distilled water, and fifty centigrammes of the filtered liquid were injected into the peritoneal cavity of a guinea-pig. No inflammation was produced, but at the end of a few weeks the animal began to lose flesh, and died at the end of the fourth month. The liver, spleen, and lungs were full of granulations and grey masses, transmissible by inoculation. It was this secondary tubercular substance which supplied the material for the inoculation experiments. With distilled water, an infusion of caseous fragments of the organs was made, and a sheet of filtering paper was saturated with the liquid and then allowed to dry. It was then cut up in strips of the same width, each of which would yield, to a small quantity of water, a similar dose of the virus. Preliminary experiments showed that the inoculation of this produced tubercle with certainty. Some strips of the paper were exposed to the action of various disinfectants. In a chamber, fifty cubic metres in area, strips were exposed to the fumes of sulphur for twenty-four hours. The results showed that it was necessary to burn twenty grammes of sulphur in this chamber to render the virus innocuous. When the quantity burned was less than twenty grammes, the animals usually died tuberculous. Boiling water was found invariably to secure immunity, and so also did corrosive sublimate in a solution of one per thousand. The conclusion M. Vallin draws from the experiments is that it would be well every year to purify by sulphurous fumigation all prisons, barracks, hospitals, and schools.

## ELECTRIC STORAGE WORKS AND LEAD POISONING.

IT seems that another manufacture is added to the list of those in which the health of the operatives engaged is likely to be injuriously affected by the poisonous effects that the materials employed have upon those who are constantly brought in contact with them. For some time past several cases of plumbism have occurred at the East-end of London among the labourers engaged in some large "electric storage" works. Inquiry has shown that the lead in these cases is probably introduced into the system by means of the substance used to cover the plates of the storage batteries. We do not know the exact nature of this paste, but it is made on the premises, and part of the process consists of mixing a powder containing lead with strong sulphuric acid. During the procedure fumes are given off. In one of the cases brought under our observation the toxic effect due to lead had been rapidly induced, and the patient exhibited, in addition to the usual blue line on the gums, the rarer phenomenon of extensive deposit on the buccal mucous membrane. But the cases of plumbism have not been limited to those who prepare the paste, since several instances have occurred among those handling it in applying it to the plates. It is probable that the majority of the cases have arisen from the men not being fully acquainted with the dangerous nature of the material they were dealing with. It is to be hoped, now that attention has been drawn to the matter, necessary precautions will be taken by the management of the companies engaged in the manufacture of these batteries to prevent any more cases occurring among their workpeople. The use of masks in rooms where the paste is made, and the fumes given off, and the wearing of stout leather gloves, often renewed, by those who have to apply the paste to the plates, would, we think, check the evil. An inspector of factories ought, however, at once to visit and report upon these establishments, and suggest any further precautions that might occur to him after inquiring into the nature of the various operations carried on.

## A BOON TO HOLIDAY-SEEKERS.

MEDICAL men in recommending foreign travel and sea voyages to their patients often find that their advice cannot be followed on account of the expense they entail. It is interesting, therefore, to learn that a system of cheap return tickets has been instituted by the P. and O. Company, which brings the advantages of rest and change of climate and scene within the reach of persons of comparatively moderate means. By this new scale of charges a visitor to Australia, if he is back in London within nine months, pays only a hundred guineas for his double passage.

A trip to Egypt and back in the season will cost him only some thirty guineas. For a hundred guineas he may travel from London to India and back if he is absent twelve months, whilst for periods of three and six months the fare is less. The most attractive feature in the programme is, perhaps, the return journey to China and Japan. For a hundred guineas a man may have a return ticket to Shanghai and Yokohama, which allows him to spend six months in these countries; and when the moderate cost of living in China and Japan is considered, it may be safely taken for granted that for about a pound a day the over-taxed student or wearied professional man may travel through the tropics and spend the winter months in the bracing climate of North China or amidst the charming scenery and interesting people of Japan.

## THE SANITARY STATE OF CARSHALTON.

A MEETING which has recently been held at Carshalton has prominently brought out the facts that the parish is in sore need of sanitary improvement. Since 1875 the parish has on several occasions been visited by scarlet fever, it has an unnecessarily high death-rate, and, if we may judge from the description given in a local contemporary, the "pretty village stinks night and day with reeking cesspools." Complaints have also been addressed to the Local Government Board as to the need for a system of drainage. Under these circumstances Mr. E. L. Jacob, the medical officer of health, hearing of the meeting in question, attended it with a view of aiding by his advice those who had professedly assembled in order to discuss the sanitary requirements of the parish. After a speech, however, in which the rector indulged in abuse of all systems of drainage, and, oddly enough, recommended the adoption of earth-closets as a remedy for conditions resulting from the fact that the subsoil is sodden with slop-water and other liquid refuse, the meeting became so noisy that any calm discussion of the question was impossible. Hence, in all probability, Mr. Jacob's convincing arguments both as to the need for a system of sewerage, and as to the impossibility of securing an improvement in the sanitary state of the village except by such a measure, failed to carry the weight they should have done. But we can hardly think that the sanitary authority will in any way be deterred from performing its obvious duty in this matter merely because a meeting, which is locally characterised as having "resembled an Irish wake," declares its desire to maintain the existing state of affairs, which have already given the place so unenviable a notoriety. We also note with regret that a medical practitioner was induced to support the opponents of sanitary reform by sustaining their objections to any sort of system of sewerage.

## THE PHYSIOLOGICAL ACTION OF HAY.

A PAPER has been communicated to the Académie des Sciences by M. A. Sanson on a subject which has not, at present, a direct bearing on human therapeutics, but which is, nevertheless, of considerable interest to those who have to provide food for horses, a class which probably includes most of our readers. The object of M. Sanson's researches was to ascertain whether hay does or does not possess the stimulant properties which have been ascribed to it. If such an influence is exerted it should be revealed by changes in the neuro-muscular excitability of the animal, and this therefore has been tested by the induced current, before and after the ingestion of a definite quantity of hay, or of its active principle, which has been isolated. The conclusions reached are as follows. The pericarp of the fruit of the grasses which are cultivated for hay contains a substance soluble in alcohol, which possesses the property of exciting the motor cells of the nervous system. This substance, the existence of which has been suspected by some and denied by others, is not, as has been supposed, identical with the odorous principle of vanilla (vanilline), and indeed has no analogy with the latter. It is a nitrogenised material which seems to belong to the group of alkaloids. It is uncrystallisable, finely granular, and brownish in colour in the mass. Its composition seems to be $C_{50}H_{21}NO_{12}$. M. Sanson proposes to call it avenine. All the cultivated grasses seem to contain this substance, but certainly in different degrees. The differences, however, seem to be purely quantitative, the substance itself is identical in all the varieties. The quantity does not depend solely on the variety of grass, but also on the locality in which it has been cultivated. When the proportion is less than 0·9 per cent. of air-dried hay, the dose is insufficient to cause a distinct increase in the neuro-muscular excitability of the horse, but when this proportion is exceeded the result follows with certainty. The amount is not directly indicated by the colour of the hay, nevertheless the dark varieties as a rule contain more than the light. The alkaloid is sometimes not present in the light, but is never absent in the dark varieties. The effect is produced more promptly by the isolated active principle than by the whole hay, but in each case after commencing it goes on increasing for a certain time and then lessens and disappears. The total duration of the recognisable effect is about one hour per kilogramme of hay ingested.

## A HOSPITAL DRUG BILL.

WE have been favoured with the sight of the annual drug bill of one of our largest metropolitan hospitals. A consideration of the items gives some insight into the immensity of the work carried on within the walls of these institutions. Taking, for example, some of the most requisite, we find ten tons of linseed meal, at a cost of £125, required for poultices. Lint for dressing ordinary wounds cost £443; cotton-wool of all kinds, £183; carbolic acid, £223; carbolised muslin, £180; spirits of wine, £585; iodide of potassium, £80; nitrate of silver, £111; quinine, £300; cod-liver oil, £190. The treatment of dyspepsia calls for an expenditure on bismuth alone of £93. On looking through the long list, one is struck with the moderate amounts charged for elegant and expensive preparations; and whilst every new remedy seems to have been ordered, the quantity never appears to be large. This testifies, we think, strongly to the practical nature of the work done, and to a conscientious determination on the part of the staff to keep down unnecessary expenses. The item for renewals of glass ware &c. seems large, but breakages are unavoidable in a large establishment, and with such a press of work. The employment of toughened glass, or, for many purposes, of enamelled iron, might prove in the long run more economical than the use of ordinary vitreous ware. But the whole account is eminently satisfactory, and it would be well if the subscribing public made themselves more generally acquainted with the practical details; they would then give more liberally—certainly they would give for more useful purposes than is often the case at present. Sentiment, interest, and locality have too much influence in determining subscriptions, and the stream of charity is often turned on institutions comparatively well-to-do, to the neglect of those which are struggling in poor neighbourhoods doing useful work, but which is not of a kind to appeal to the generosity of neighbours in richer districts. At this season great pressure is thrown on the resources of our large metropolitan hospitals; we would therefore urge the charitable to give freely and with discrimination. Choose those institutions that are doing the most active general good, and are drawing largely on their reserve funds. Institutions that, however urgently clamorous, have considerable reserve funds untouched, or are engaged

in building operations, can afford to wait till the present season of pressure on poorer charities has passed. Whilst some of the big general hospitals are closing their wards, it is no time to ask for funds for enlarging existing institutions started for special purposes. When large hospitals cannot meet their daily expenses, it is an absolute wrong to fritter away money on institutions that are hoarding reserves with a view to future contingencies. If any person should be in doubt as to the direction in which his charity should flow, we would say he can scarcely err in turning it towards any one of the large general hospitals that are solely dependent on voluntary contributions.

## SACCHARIFYING POWER OF THE SALIVA.

M. A. BÉCHAMP, in an article contributed to the first number of Brown-Séquard's *Archives de Physiologie* for the present year, after commenting upon the circumstance, at one time considered remarkable, that whilst the saliva of man possesses the power of converting starch into sugar, no such power is exerted by the saliva of the horse, dog, or ox, undertakes to show—first, that human buccal saliva is not indebted for its diastatic power to any alteration effected by the air on the various immediate organic principles which are secreted by the glands and discharged into the buccal cavity; secondly, that the power of converting starch into sugar belongs to a peculiar and special zymase which is contained in the saliva, and that this zymase is the outcome of the action of the microzymes proper to the salivary glands, of the microzymes of the anatomical elements which line the buccal cavity and the tongue, and of the microzymes and infusory animalcules that accumulate in the interstices of the teeth. Lastly, that the parotidean saliva of the horse and that of the dog do not saccharify boiled starch naturally, but that they acquire this power when they are placed in contact with the buccal organisms of man. In the course of these experiments he found the buccal infusory animalcules to have an extraordinary power of converting starch into sugar, one-thousandth part of a gramme of the matter adherent to the free border of the gums of a healthy man, after being frequently washed with a weak solution of creasote, acting powerfully on starch paste. This material was formed of the débris of epithelial cells, of numerous molecular granules, and of many moving or stationary short or long bacteria (probably segments of Leptothrix buccalis), and no doubt some remains of food. The buccal organisms or granules are the bodies he endeavours to show are the really active bodies, for he has accomplished the removal of the other elements, and found the saliva of man still to retain its powers, and he supplies evidence to show that they are not identical with the bodies which develop in the saliva either of man or of the animals named after removal from the body and filtration.

## FEVER IN LIVERPOOL.

THE Registrar-General's recent weekly and quarterly returns have showed a remarkably excessive rate of mortality from "fever" in Liverpool, recalling the fever-rate which used to be endemic in that city twenty years ago. The deaths referred to "fever" (including typhus, enteric, and simple or ill-defined) within the borough had continued to decline, almost steadily, in recent years; the fatal cases, which were 900 in 1870, did not exceed 254 and 256 in 1879 and 1880. In 1881, however, a slight increase occurred, and the number rose to 291; whereas those returned in the four quarters of 1882 were 116, 123, 119, and 235, respectively, making the total for the year 593, which exceeded the number returned in any year since 1871. The outbreak assumed an epidemic character in August last, and in the last five months of the year the annual death-rate from this cause averaged 1·4 per 1000 of the population. The mean rate for the whole year in Liverpool was, indeed, equal to 1·1, and was three times as high as the average rate in the twenty-eight large English towns dealt with in the Registrar-General's weekly returns. The death-rate from all causes in Liverpool last year averaged 26·5 per 1000, against an average of 22·3 in the twenty-eight towns. This high rate was, however, equalled in Sunderland, where exceptional zymotic fatality prevailed, and was slightly exceeded in two other Lancashire towns. The death-rate last year was 26·7 in Manchester and 27·6 in Preston. Twenty years ago the death-rate in Liverpool and Manchester ranged between 30 and 40 per 1000. A decline to 26 is as conclusive evidence of sanitary progress as is the still excessive rate of the amount of sanitary work that remains to be done in those cities.

## LARGE AND SMALL ASYLUMS.

AFTER all there is to say on the subject of large and small asylums for the insane has been said, the question of expediency will resolve itself into one of specific purpose. If the object be simply to house the crippled in mind comfortably and maintain a healthy discipline at the least cost, large, or comparatively large, institutions will be preferred. If, on the other hand, the business of the medical psychologist is to *cure*, then obviously small asylums will be seen to be not only the best, but the only ones admissible. Patients afflicted with mental disease *cannot* be properly treated in classes or in large wards. If anything is to be done for their relief, it must be done in detail and individually. Asylums for the insane should never exceed the dimensions of an ordinary hospital, and they should be conducted as hospitals. The provision of houses for the safe custody of the incurable is another matter; but no case of mental disease ought to be considered incurable until every possible mode of active treatment has been tried, and the chances of recovery are absolutely exhausted. This doctrine will, of course, be regarded as heterodox by those who set out with the conviction that disease of the brain causing mental derangement is always incurable, which is the notion with which a large number of alienists are honestly impressed.

## THE SPREAD OF SCARLATINA.

SCARLATINA has been fatally prevalent in the Hornsea urban sanitary district in Yorkshire. The medical officer of health has reported some forty cases and seven deaths, and he attributes the spread of the disease to the practice of allowing convalescents to mingle freely with others in the streets and elsewhere. This is a common cause of complaint, but it is one which it is most difficult to deal with in the absence of the provision by the authority of proper means of isolation. Convalescents in the houses of the poor must, almost necessarily, leave their houses before all danger of infection is over; and it is the duty of the sanitary authority to make due provision against this source of danger by the provision of a hospital for infectious diseases.

## NERVE ENDINGS IN THE INTESTINE.

IN an investigation into the process of the absorption of fat, Professor Thanhoffer, some years ago, noted that the epithelium cells presented, at certain spots, a special arrangement, most distinctly seen in sections stained with osmic acid. He has recently investigated by other methods the significance of this arrangement. He finds that, at the base of the villi, where the epithelial layer passes from one villus to another, and also upon the villi, sometimes near the apex, the epithelium covers bud- or cup-like structures, consisting externally of epithelial cells and internally of cells resembling those of the taste-corpuscles of the tongue. The upper

process of the inner cells reached the pore occupying the apex of the body; some of the cells presented a short, hair-like process. The deeper extremity of the superficial cells presented no processes. Some fibres of the non-medullated nerve fibres which penetrate the body go to the deeper cells. An interesting problem is whether these organs are for the purpose of receiving thermal, tactile, or chemical stimulation, but this can only be solved by further researches. Certainly, however, they are important, since they are present in the intestine of man and of all the mammalia.

## PINS AND NEEDLES IN THE HUMAN BODY.

DR. PERGAMI of Crema has published, in the *Gazzetta degli Ospitali*, Dec. 24th, 1882, an elaborate commentary on the case of a girl, aged eighteen, from whose body he removed, by incisions, twenty-four pins and needles—ten of them from the right breast and six from the left one. The patient admitted that she had herself introduced ten of the foreign bodies, but insisted that fourteen had penetrated accidentally, a statement having very slight claim to acceptance under all the circumstances. In the course of his observations, Dr. Pergami quotes the case recorded by Ferrario, who, in 1829, extracted from a female patient, in the great hospital at Milan, 255 needles, which the woman confessed she had herself introduced into her body.

## KING'S COLLEGE, LONDON.

THE retirement of Professor Bentley from the office of Dean of the Medical Faculty, a position which he has filled with much ability, energy, and courtesy during a period of twenty years, has induced a number of his old pupils and colleagues to take the opportunity of presenting him with some memorial of their affectionate regard and esteem. A large and influential committee has been formed, with Dr. Hayes and Mr. Rose as secretaries, and Professor John Wood, F.R.S., as treasurer.

## THE WEST MALLING CASE.

THE coroner's inquiry into the circumstances attending the death of Sarah Ann Wright, at West Malling, has, after two adjournments, resulted in a verdict of manslaughter against the Rev. J. H. Timins; the jury, at the same time, expressing their opinion that the oil of almonds was administered by him with no evil intent. Mr. Timins was bound over to surrender himself for trial at the Kent Summer Assizes. By this case an important question is raised, on which we shall have to comment in our next issue.

## THE MEDICAL SOCIETY OF LONDON.

ON Monday evening next Dr. Whipham, Physician to St. George's Hospital, will open a discussion on the important question of the association existing between bacilli and tuberculosis. It is expected that many practitioners other than those who are Fellows of the Society will join in the debate.

## MR. GLADSTONE.

WE are glad to be able to say that very late accounts from Mrs. Gladstone to Dr. Andrew Clark give a most satisfactory report of Mr. Gladstone's progress in every respect.

AT a meeting of the Royal Humane Society, held on Wednesday in the offices, Trafalgar-square, the Fothergill Gold Medallion, of the value of fifty guineas, was presented to Dr. Henry Robert Silvester, for his researches and discoveries in the method of inducing respiration in cases of apparent death from drowning and other causes.

THE magistrates at Kells, Ireland, were recently engaged in hearing a charge of indecent assault brought against Dr. Sparrow, medical officer, of Kells, by a female dispensary patient. Dr. Sparrow was accompanied in court by a number of medical men in the district. After the girl had been examined at considerable length, the magistrates unanimously dismissed the case, and held Dr. Sparrow free from any imputation. Defendant's counsel said that had the case proceeded Dr. Sparrow had in court many witnesses, medical and others, who could have established beyond a doubt that, so far from being guilty of the extraordinary charge made by the girl against him, he had simply done his plain duty as a medical man.

WE regret to announce the death, after a short illness, of Dr. Shinkwin, of Cork, at his residence, North-mall, Cork. Deceased was a graduate in Medicine of the University of Aberdeen and of the Queen's University in Ireland, and held the post of Senior Surgeon to the North Charitable Infirmary. Dr. Shinkwin was the author of a work on Hydrophobia, and leaves a widow and two children, besides a large circle of friends, to mourn his loss.

CIVIL SURGEON EDGAR CROOKSHANK has received, by desire of H.R.H. the Field Marshal Commanding-in-Chief, the Egyptian medal and clasp (Tel-el-Kebir) in recognition of his services during the late campaign. Mr. Crookshank served at Ismailia, Kassassin, and Tel-el-Kebir, where he advocated the adoption in military surgery of the latest antiseptic methods, notes of which have already appeared in our columns.

IT is stated in the *South London Press* that in the Newington Infirmary there are thirty-two beds on the basement, and the patients in some cases are obliged to step from their beds on to the bare asphalte; that there is no nurse for the place, and the patients have to do the best they can for themselves, without assistance from others; and that there are altogether in the infirmary eighty cases above the certified number.

ANOTHER example of the fatal folly of the amateur use of chloral was afforded last week in Kensington. The victim was a lady who had been in the habit of employing the drug "without measuring the dose," and who, according to the evidence adduced at the inquest, declared immediately before her death that she had taken fourteen doses.

THE English Committee of the Darwin Memorial Fund, which has its head-quarters at the Royal Society, London, has now received (inclusive of subscriptions from abroad) £4000. The number of subscribers in the United Kingdom is only about 600, whilst in Sweden no fewer than 1400 persons have subscribed.

DR. O'FARRELL, medical officer, reported to the guardians of the Boyle Union on the 20th inst. the outbreak of famine fever in the union, and the admission of four virulent cases into the hospital.

DR. CLEARY has been elected coroner for the county of Limerick.

THE authorities of the German Hospital at Dalston have secured the spacious premises known as Graham House, in Dalston-rise, directly opposite the hospital, to be used for convalescent purposes. This step, which was first suggested at the last annual dinner of the institution, held at Willis's Rooms, will relieve the present premises, and enable the hospital authorities very materially to extend the u efulness of the charity.

# Public Health and Poor Law.

## LOCAL GOVERNMENT DEPARTMENT.

### REPORTS OF MEDICAL OFFICERS OF HEALTH.

*Bolton.*—In his eighth report on the sanitary condition of the borough of Bolton, Mr. Edward Sergeant quotes the death-rate for 1881 as 19·18 per 1000 living. In his reference to zymotic diseases he records three attacks from puerpural fever all due to a nurse who, whilst suffering from erysipelas of the face and hands, attended women in their confinements, an occurrence pointing to the need for requiring midwives to have at least some rudimentary knowledge of the work in which they engage. Small-pox did not cause a single death; measles was almost entirely absent; scarlet-fever fell below the average, as did also enteric fever; whereas whooping-cough was very fatal, causing as many as 119 deaths. Referring to the compulsory notification of infectious diseases in operation in the borough, Mr. Sergeant points out that 469 cases were reported to the sanitary authority. He admits a high mortality amongst the cases reported, but he is convinced that it is not due to intentional concealment of the milder cases for which no medical advice is sought and concerning which no report is made, and he says he has not found a single case in which medical advice has been delayed from the fear of notification. He alleges, indeed, that the public are in no way averse to notification, and that all the opposition to it comes from medical sources. Having secured the notification it is stated that the next step is to secure means of isolation, and a description of a proposed hospital is then given. We entirely disagree, however, in the view that the provision of means of isolation properly follows on a system of notification. Sanitary authorities should, in our opinion, first make such use of the powers afforded them by the provision both of a hospital and of adequate means of disinfection and then they can reasonably ask for further powers to enable them fully to utilise the means of prevention adopted. We are, however, glad to learn that the plans of a hospital have been decided upon. Two large ward-pavilions for the reception of two diseases in both sexes, and one smaller one for any special cases will be provided, in addition to the buildings necessary for administrative and other purposes, the total accommodation being in the first instance for twenty-eight patients. Bolton has a population of 105,414, and even with an efficient system of notification, which will greatly facilitate the early isolation of first cases, it will, we expect, be found necessary to increase the permanent means of isolation to be provided. The report closes with a series of carefully prepared tables and diagrams showing the relation of certain deaths to meteorological and other conditions, the distribution of cases of infectious diseases, and other matters of local interest.

*Nottingham.*—Dr. Seaton, in a comprehensive report as to the measures required for the improvement of the public health in a district known as Narrow Marsh, considers, amongst other subjects, whether it would be better to open up separate courts and yards or to proceed under Sir Richard Cross's Act for the whole district, and he inclines to the view that advantage will lie on the side of the more comprehensive scheme. This would necessitate the provision of new dwelling accommodation for about one-third of the inhabitants, and, as these are of the poorest classes, the chief accommodation required would be in the way of sub-let houses. Dr. Seaton advocates economy in this provision, and expresses the opinion that persons who can only pay two or three shillings a week for the accommodation of themselves and their families could not be expected to live under such favourable sanitary conditions as those who can pay five or six shillings. There may be truth in this, and it is essential to success that such dwellings should be remunerative, but we would rather have seen advice to the effect that in the interests of the inhabitants, both financially and otherwise, everything should be done to aim at the highest sanitary conditions procurable under the circumstances.

*Belfast.*—During the four weeks ending 23rd December, the births numbered 468 and the deaths 633, the latter being equal to a rate of 39·56 per 1000. Of these 278 were due to lung diseases, showing a death-rate of 17·3; and 119 from zymotic diseases, or 7 per 1000. The deaths during the month were much above the average, due probably to the inclement weather with which Belfast was visited. Scarlet fever prevailed, but the other zymotic diseases, especially typhus and typhoid fevers show a light mortality.

### SANITATION AT BURGESS HILL.

An inquiry was held on the 29th ult. at the offices of the Local Board, Burgess Hill, by Major Tulloch, Royal Engineers, with reference to the proposal to borrow £10,000 for further works of sewerage and sewage disposal. The clerk, in explaining the manner in which the money already received had been spent, said that the loan now asked for was actually needed to keep the works going. Dr. Brown said that the present state of the sewers was most unsatisfactory, and that the expense the Board was going to was unwarrantable, as, in his opinion, a system equally as perfect and far less expensive might have been adopted. After some more discussion the inquiry, which had lasted two hours, terminated.

The Mile-end Board of Guardians are aggrieved at the "apathy" of the Local Government Board in not authorising the opening of their new infirmary. They complain that they are suffering pecuniary loss by the delay enforced upon them.

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 6094 births and 3862 deaths were registered during the week ending the 20th inst. The annual death-rate in these towns, which had been equal to 21·8 and 22·4 per 1000 in the two preceding weeks, further rose to 23·4 last week. The lowest rates in these towns were 13·9 in Cardiff, 14·5 in Leicester, 16·0 in Plymouth, and 16·7 in Portsmouth. The rates in the other towns ranged upwards to 29·5 in Bolton, 30·0 in Leeds, 30·7 in Liverpool, and 31·4 in Manchester. The deaths referred to the principal zymotic diseases in these twenty-eight towns were 390, and showed an increase of 27 upon the exceptionally low number in the previous week; 97 resulted from whooping-cough, 86 from scarlet fever, 82 from measles, 56 from fever, principally enteric, 40 from diarrhœa, 22 from diphtheria, and 7 from small-pox. No deaths from any of these zymotic diseases were returned in Oldham, whereas they showed the largest aggregate fatality in Leeds and Hull. Whooping-cough caused the highest death-rates in Leeds and Hull; scarlet fever in Leeds and Sheffield; measles in Liverpool and Preston; and fever in Hull and Sunderland. Thirteen of the 22 deaths from diphtheria in the twenty-eight towns were returned in London, and 3 in Liverpool. Small-pox caused 3 deaths in London, 2 in Newcastle-upon-Tyne, and one both in Nottingham and in Derby. The number of small-pox patients in the metropolitan asylum hospitals, which had been 80 and 99 on the two preceding Saturdays, were 93 at the end of last week; only 11 new cases of small-pox were admitted to these hospitals during last week, against 17 and 32 in the two previous weeks. The Highgate Small-pox Hospital contained 8 patients on Saturday last, 2 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had steadily declined in the five preceding weeks from 637 to 361, were 389 last week, and were 130 below the corrected weekly average. The causes of 109, or 2·8 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Newcastle-upon-Tyne, and in four other smaller towns; the proportions of uncertified deaths were largest in Salford, Halifax, Sunderland, and Hull.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had steadily declined in the five preceding weeks from 32·1 to 26·8 per 1000, was again 26·8 in the week ending the 20th inst.; this rate exceeded, however, by 3·4 the mean rate last week in the twenty-eight English towns. The deaths referred to the principal zymotic diseases in these Scotch towns, which had been 125 and 102 in the two preceding weeks, were 111 last week, and equal to an annual rate of 4·7 per 1000; this zymotic rate was nearly

double the rate from the same diseases in the large English towns. No deaths were referred to these zymotic diseases in Perth last week, whereas they caused the highest death-rate in Glasgow. The fatal cases of whooping-cough, which had been 55 and 44 in the two previous weeks, rose again to 51 last week, and included 29 in Glasgow and 10 in Dundee. Of the 18 deaths referred to diphtheria 7 occurred in Glasgow, 5 in Edinburgh, and 4 in Paisley. The 10 deaths attributed to "fever" showed an increase of 3 upon the number in the previous week, and included 6 in Glasgow. Eight of the 9 fatal cases of measles and 6 of the 9 of scarlet fever were returned in Glasgow. The deaths referred to acute diseases of the lungs in the eight towns, which in the four preceding weeks had ranged between 228 and 163, further declined to 159 last week, but exceeded by 26 the number from these diseases in the corresponding week of last year. The causes of 110, or more than 17 per cent., of the deaths registered in the eight towns last week were not certified.

### HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 31·9 and 29·4 per 1000 in the two preceding weeks, further fell to 25·5 in the week ending the 20th inst. During the first three weeks of the current quarter, the death-rate in the city averaged, however, 28·9 per 1000, against 21·0 in London and 21·4 in Edinburgh. The 171 deaths in Dublin last week showed a further decline of 26 from recent weekly numbers; they included 11 which were referred to whooping-cough, 7 to "fever," 2 to diarrhœa, and not one either to small-pox, measles, scarlet fever, or diphtheria. Thus 20 deaths resulted from these principal zymotic diseases, against 17 and 19 in the two preceding weeks; they were equal to an annual rate of 3·0 per 1000, while the rate from the same diseases was equal to 2·4 in London and 3·8 in Edinburgh. The fatal cases of whooping-cough, which had steadily increased in the four previous weeks from 6 to 12, were 11 last week. The 7 deaths referred to "fever" also showed a further increase upon recent weekly numbers, and were equal to a rate far exceeding that prevailing either in London or Edinburgh. The deaths of infants and of elderly persons were fewer than those returned in any recent week. The causes of 27, or more than 15 per cent., of the deaths registered during the week were not certified.

### INFANT MORTALITY IN SWITZERLAND.

According to statistics given by Dr. Custer, in his recently published work on the above subject, the annual birth-rate per 1000 inhabitants for the years 1873–1877 was in Switzerland 32·8; while for several other European countries it is quoted as follows:—Wurtemburg, 46·2; Bavaria, 42·9; Austria, 40·2; Italy, 37·8; and Sweden, 31·8. For the period 1867–1871, the birth-rate in Switzerland averaged 30·8 per 1000 inhabitants. The proportion of deaths of children in their first year was during the earlier period 24·6 per cent.; while in the later period it seems to have been only 19·5 per cent. The canton of St. Gall has been specially noticed by Dr. Custer, who resides within its limits; and he records the fact that the birth-rate in that part of Switzerland is 30·3 per 1000 inhabitants; the mortality amongst infants during their first year amounting to no less than 29·3 per cent. of the births. In comparing the Swiss birth-rate with the average rate for the whole of Europe (38 per 1000 inhabitants), Dr. Custer calls attention to the fact that the number of children in families of the better classes is less than in households of the lower and poorer ranks of society. This latter fact tends to increase the scale of infant mortality, as of course the circumstances of the parents often preclude them from devoting the same care to their offspring that the wealthier classes can give. It is remarked that the mortality of infants is much affected by the fact whether the mothers can tend them for a certain period. At Mulhouse the death-rate amongst the children of the operatives at the factory of Messrs. Dollfuss used to be 36 to 38 per cent. of the births. When the firm introduced the system of paying full weekly wages to married women for six weeks before and after their confinement (without requiring them to work) the infant mortality was reduced by one-third. An analysis of the social grades amongst which the deaths in St. Gall took place, showed that for each hundred children born the following death-rates were found to exist in the various classes of society:—Clergymen, 11·7; teachers, 15·8; merchants and clerks, 16·4; agriculturists, 20·6; factory workers, 22·3; daily labourers, 24·0. Observations made in the Canton of Glarus showed that infant mortality in the families of persons of property, merchants, officials, &c. was not half what it was in the case of the children of factory operatives, living in confined rooms. Some interesting details are furnished respecting the proportion of deaths at various portions of the first year of life. In 1878 there were 62 per cent. of the deaths during the first quarter, and 31½ per cent. during the second three months. The first month alone showed a proportion of 31 per cent. of the entire number of deaths. The third and fourth quarters together only contributed 6½ per cent. to the total.

## THE SERVICES.

Surgeon-Major J. F. Supple has been ordered to proceed from Chatham to Devonport to take charge of the hospital for women and children at that station. Surgeon R. H. Gardner, M.D., who has recently returned from Egypt, succeeds Surgeon-Major Supple at Chatham.

ARMY MEDICAL DEPARTMENT.—Brigade Surgeon Henry Richard Lobb Veale, M.D., and Brigade Surgeon John Sarsfield Comyn, M.B., have been granted retired pay, with the honorary rank of Deputy Surgeon-General. Surgeon-Major Henry Carden Herbert, M.D., to be Brigade Surgeon, vice J. H. Beath, M.D., C.B., granted retired pay. Surgeon-Major Robert Owen Hayden, to be Brigade Surgeon, vice F. M. Skues, granted retired pay. Surgeon-Major David Arno Smet Thorburn, M.D., retires from the service receiving a gratuity.

MILITIA MEDICAL DEPARTMENT.—Surgeon John Holmes Jephson, 3rd Battalion, Middlesex Regiment, to be Surgeon-Major.

RIFLE VOLUNTEERS.—11th Lancashire: Surgeon James Alfred Harris resigns his commission.

ADMIRALTY. — The hospital-ship *Carthage* will leave Alexandria shortly, and her fittings will be removed to the Ramleh Palace, where the permanent military hospital for the Army of Occupation is established. Inspector-General of Hospitals and Fleets Samuel Sloane Dalzell Wells has been placed on the Retired List of his rank from the 16th inst.

The following appointments have been made:—Surgeon Horatio R. Sparrow, additional, to the *Nelson;* Surgeon William G. O. Smith, to the *Cleopatra*, vice Connell; Surgeon Edmund D. Maddick, additional, to the *Pembroke;* Surgeon John S. Logan, M.D., additional, to the *Duncan;* Surgeon Thomas Nunan, M.D., additional, to the *Cambridge;* Surgeon William H. Norman, additional, to the *Vernon;* Surgeons Robert J. Lawson, M.B., John Cushin, Francis Woore, and John M. Phillips, M.B., to Plymouth Hospital; Surgeon John B. B. Triggs, M.B., additional, to the *Duke of Wellington;* Surgeon John Lyon, M.D., to the *Repulse;* Surgeon James Porter, M.B., to the *Wye*, vice Lyon; Surgeon Thomas Loane, M.D., to the *Northumberland*, vice Sparrow; Surgeon Alexander J. J. Johnston, to Haslar Hospital, vice Loane.

# Correspondence.

"Audi alteram partem."

## MANGANESE IN ANÆMIA.

*To the Editor of* THE LANCET.

SIR,—The investigations of Drs. Ringer and Murrell on the therapeutic effects of manganese in amenorrhœa remind me of experiments which I made in 1867-68 as to the influence of manganese, nickel, and zinc in anæmia, chlorosis, &c., in which similar favourable results were obtained. Quoting from the Transactions of the Clinical Society for 1868-69, Vol. II., p. 122:—

"The experiments were undertaken primarily to test an hypothesis arrived at deductively. The starting point was found on the two postulates: (1) That there must be some relation between the substance administered and the organism on which the effects produced depend; (2) that so far as the substance is concerned the basis of this relation

can only be its chemical properties, using this term in its widest sense. The conclusion arising out of these which constituted the hypothesis to be examined was: (3) That substances closely allied chemically must have an analogous action on the system, or the diversity in their operation should be capable of explanation on chemical principles. In other words, chemical groups ought to form therapeutical groups. No fact in therapeutics is more certain than that iron cures anæmia and chlorosis, and this metal stands at the centre of a group closely allied in chemical properties, which have to it certain well-defined relations. This group, then, furnished the conditions requisite for experiments which might support or overthrow the hypothesis. A second object also offered itself, which a few remarks will explain. The usual interpretation of the good effects of iron in anæmia is that it supplies a natural constituent of the blood which is deficient. This, however, if a true explanation at all (which is strenuously denied by some eminent men on grounds which need not be enumerated here), carries us back but a very short step towards a real comprehension of the mode of action of iron. To attain this the question must be answered, why iron is a normal constituent of the blood. The answer is not given by simply enumerating the uses which it serves. As understood by me, iron is normally present in the blood, because of the chemical affinity between it and the organic matter of the blood corpuscles, and it is useful in virtue of the influence which this affinity exerts on the organic processes. According to this view, then, iron does not cure anæmia because it is a constituent of healthy blood—i.e., the two do not stand in the relation of cause and effect; but the cure of anæmia and the presence of iron in the blood are alike consequences of the affinity of iron for organic matter and of the influence of this affinity on organic operations. If the mode of action of iron be that indicated, then an allied metal, having similar relations with the organic proximate principles, will have a similar effect on the organic processes; and it may be that under certain circumstances its curative influence may be even superior to that of iron. This, however, is inherently improbable; but it is not at all unlikely that by the administration together with iron of one or other of the allied metals, the action of the iron may be aided. The object, then, was to ascertain, if possible, the indications for the employment of a particular member of the group as an accessory to iron in any class of cases. Manganese and nickel stand on one side of iron, the other on the other, as to their general chemical relations; and it seemed worthy of attention, should it be found that they exerted any favourable influence at all, to endeavour to determine what special set of symptoms associated with anæmia indicated the addition of one or other of them to iron."

The metals were administered in the form of chloride, and cases are related in which both manganese and nickel cured anæmia as promptly as iron could have done it, while zinc failed. Manganese did good whether the anæmia was associated with amenorrhœa or menorrhagia, from which I conclude that the favourable effect of manganese is attributable to its influence on the general health and on the blood, and not to any special effect on the catamenia; but I found that, "in using these metals as accessories to iron, manganese seemed to have a special influence in promoting the return of the catamenia, and nickel a special property of checking leucorrhœa."

Drs. Ringer and Murrell by their experiments on the comparative effects of salts of sodium, potassium, and ammonium, and of the arsenites and arseniates, are rendering services to scientific therapeutics, the value of which can scarcely be estimated. When alkalies or salines are indicated, it is not a matter of indifference what base we employ. Almost the only property common to potash and soda is their power of combining with and neutralising acids; in their relations with the important organic constituents of the body, nerve, muscle, blood-corpuscles, and albumen, they differ completely. Their similarity is apparent only, and from their physiological effects alone we might conclude that they were respectively the alkaline members of different series of metals. Carbonate of potash and of soda will alike neutralise free acid in the stomach, but after absorption their combinations with the blood and the whole of their course and work in the system will be different. The researches of Drs. Ringer and Murrell, therefore, have a bearing on practical therapeutics; but, more important than this, more important than the guidance they afford in the employment of different preparations of arsenic, more important than the introduction of an additional remedy for amenorrhœa in manganese, is the coördination of therapeutics with chemistry and the advance made towards a scientific basis for medicine.

I am, Sir, your obedient servant,

Seymour-street, Jan. 16th, 1883. W. H. BROADBENT.

## MAIN SEWERAGE AND HOUSE DRAINAGE OF CANNES.

*To the Editor of* THE LANCET.

SIR,—In the autumn of 1882 the Mayor of Cannes saw me relative to works of main sewerage for Cannes. He was in England for the purpose of obtaining information as to the best English mode of sewering. I furnished him with copies of reports, plans, sections, and details, but in conversation stated that details were only useful to an expert who knew by experience where and how to apply them. Some weeks after this interview I learned from the Mayor that many defects in the sanitary state of Cannes must be admitted, and I also further learned that the municipality had determined to adopt the best remedial measures and to adopt and carry out the best forms of works, money being ready for the purpose. So you see THE LANCET had not stirred in vain. Shortly after the return of the Mayor he wrote asking me if I could visit Cannes, inspect the town, look over the plans and details proposed to be carried out, and advise as to works generally. If, however, I could not visit Cannes personally, I was requested to recommend some one of known repute to visit Cannes at once both to advise and report. I could not go, but nominated Captain Douglas Galton, R.E., F.R.S., &c., who consented, and who, after nearly a month's residence in Cannes, returned this week with plans and details to enable him to report. I need not say that a report from an authority so eminent will deserve, and I doubt not will receive, full recognition both in Cannes and in England. Works of main intercepting sewerage have been commenced, but are suspended during "the season." Extra costs are, however, being incurred by the municipality, and extra care is being taken to cleanse, disinfect, and scavenge the district. The residents in Cannes, and the intending visitors, may therefore take it from me that the Mayor and municipality have determined to make the town and district what they ought to be—that is, as perfect in sanitary works and regulations as is practicable. I am, Sir, yours, &c.,

London, Jan. 19th, 1883. R. RAWLINSON.

## "A NEW OPERATION FOR CATARACT."

*To the Editor of* THE LANCET.

SIR,—Having imagined that all conceivable methods had already been devised and practised for the extraction of cataract, I was somewhat surprised to see in your last issue an article by Professor Galezowski, of Paris, entitled "A New Method of Cataract Extraction without Excision of the Iris." I hope Professor Galezowski will not be offended if I offer a few friendly criticisms upon his paper, and point out to him that his operation resembles so much one that has previously been performed as hardly to merit the title of a "new operation." In describing the steps of his procedure, Professor Galezowski says, "After having seized the conjunctiva with fixation forceps, I puncture the transparent cornea just at its junction with the sclerotic with a very narrow-bladed Graefe's knife, and at a point 3 mm. above the horizontal diameter, then inclining the edge slightly forward I cut the *corneal flap* in such a manner that its summit shall be 2 mm. distant from the sclerotic margin."

Now, I would suggest that in nine cases out of ten no corneal flap could be made according to Professor Galezowski's directions. The average diameter of the cornea rarely exceeds 10 mm.; the space, therefore, above the horizontal diameter would rarely exceed 5 mm., and if the knife were entered 3 mm. above the horizontal diameter, and made to emerge 2 mm. below the sclero-corneal margin in nine cases out of ten it would emerge at the same spot where it entered, and the result would be an horizontal incision. In the tenth case the corneal flap, if such it could be called, would rarely exceed half a millimetre in height. Now, if this is what

Dr. Galezowski intends, the operation can scarcely be called a new one, bearing as it does such a close resemblance to a procedure to which M. Perrin lays claim. M. Perrin thus describes his operation[1]:—"La ponction et la contre-ponction sont faites aux limites de la cornée suivant une ligne passant à 2 mm. au dessus d'un méridien horizontal. A ce mœur la base de l'incision mesure 9 mm., en prenant toujours pour type une cornée de 10 mm. ..... L'incision est ensuite conduite de bas en haut de façon à aboutir 1 ou 2 millimètres au dessus du limbe de la cornée." A comparison of these two methods of procedure shows that as regards the incisions of the cornea they are almost identical. It is true that M. Perrin usually performed an iridectomy which Galezowski avoids; still, this departure hardly justifies the assumption of the title of a new operation. A very slight modification in the situation of the incision would again correspond to what I have always understood to be Lebrun's, or the Belgian operation, an operation I have performed for the last eight or nine years in almost all cases of senile cataract, with which I have every reason to feel satisfied, and which I believe is very commonly performed in England. I am, Sir, yours, &c.,

C. S. JEAFFRESON,
Newcastle-on-Tyne, Jan. 22nd, 1883. Surgeon to the Eye Infirmary.

## DILATATION OF THE FEMALE URETHRA.

*To the Editor of* THE LANCET.

SIR,—In a clinical lecture on "Calculus in the Female Bladder," published in your valuable issue of Dec. 23rd, 1882, Mr. Heath is accredited with the following words:—"I proceeded to dilate the urethra with a pair of polypus forceps and then introduced my little finger, and subsequently my forefinger, without difficulty. In this rapid dilatation there is, *of course*, some laceration, and it is usually upwards under the pubes and *does no harm*" (the italics are mine). This statement, coming from so distinguished a surgeon, is, I think, calculated to do much harm, unless properly interpreted. Although so fortunate perhaps as not to have met with a mishap in his own practice, I am sure Mr. Heath does not intend to convey the idea that dilatation of the female urethra carried to the extent of admitting the forefinger, and to laceration, does not carry with it more or less danger of permanently impairing the retentive power of the bladder. It is undoubtedly true that the urethra and neck of the bladder is, in some females, susceptible of remarkable dilatation. In an operation for the removal of a soft villous growth from the bladder of a female, Winckle introduced both fingers and forceps into the viscus, the urethral mucous membrane was fissured, and yet none of the 150 grammes of water injected after the operation escaped from the bladder. In a similar operation by Schatz, although the urethra was dilated to an extent admitting two fingers, she could not retain her water one hour after the operation, though she soon regained the full tonicity of her sphincter; but, on the other hand, it is well-known that this *not difficult* operation has been responsible for a great deal of suffering and misery in the protracted, and, in some instances, permanent incontinence of urine which it has occasioned, and rather than inculcate a feeling of safety, the novice should be warned against repeating an accident which has occurred in most experienced hands. That laceration of the urethra occurs, as a matter *of course*, is not to be wondered at when we consider the rude instruments that are made to serve the purpose of urethral dilators. In order to conform to the conditions by which alone a maximum degree of dilatation, without laceration, can be accomplished, the expansive force of the dilator should be distributed equally over all parts of the circumference of the urethra, by the unrolling of rounded blades, and not upon two or three sides of the canal as effected by the uterine dilators, polypus and bone forceps, so commonly employed. Again, the dilatation must be as gradual as it is continuous and uniform; that is, the degree of force exerted should be carefully regulated to the amount of resistance to be overcome. An instrument providing for the conditions aforesaid is constructed by Tiemann and Co. of this city, and has been used here with great satisfaction for several years. It is both dilator and speculum. When closed it is 39 mm. in circumference and is capable of expansion to 6½ centimetre.—Yours truly,

ALEX. W. STEIN, M.D.,
Surgeon to the Charity Hospital, &c., New York City.
New York, Jan. 10th, 1883.

[1] See a paper by Dr. Warlomont, Annales d'Oculist. tom. lxxi., p. 14.

## THE EFFECT OF TEMPERATURE UPON THE STAINING OF THE BACILLI OF TUBERCLE.

*To the Editor of* THE LANCET.

SIR,—In one or two of the recent communications to your journal reference has been cursorily made to the influence of temperature upon the staining of the bacilli of tubercle, but sufficient prominence has not, I think, been given to this most important fact. With active staining fluids of the best kinds, and with material rich in bacilli, failure may result as a consequence of the fluids being maintained during the process of staining at too low a temperature. This has been a common experience during the recent cold weather; even the temperature of a moderately warm room at this time of the year is too low to give uniformly good results. I endeavoured at first to obtain the necessary temperature by placing the capsules containing the preparations and fluids near the fire upon the hob or hearth, and although many of the results were highly successful, some failed, for it seems to be the case that not only too low a temperature, but even too high a temperature, may lead to failure. A water-bath is the apparatus best fitted for the purpose, as the temperature can in this way be easily maintained at about 100° F. for some hours; or if the expense of a water-bath be too great, an apparatus quite sufficient for the purpose may be made out of an ordinary hot-water dish or tin, upon which the preparations are placed, covered by a tea-cosy or a cap of felt or flannel.

Koch's experiments have shown that the temperature is all-important in the cultivation of these bacilli; and it is interesting to find that the same temperature (about 100° F.) at which they grow best is also that at which they stain best.

I make this communication in the hope of saving others the vexation and lost labour which ignorance of the fact long caused me. I am, Sir, yours truly,

SAMUEL WEST,
Physician to the Chest Hospital, Victoria Park.
Wimpole-street, W., Jan. 8th, 1883.

*To the Editor of* THE LANCET.

SIR,—Permit me to add some brief remarks to those which have recently appeared in your columns upon the methods of staining the bacillus of tubercle.

Mr. Prideaux, in THE LANCET of Dec. 30th, 1882, seems to imply that methylene blue, when used as the second stain, does not stain the bacilli of putrefaction; and therefore he recommends the use of gentian violet for this purpose. In my hands the methylene blue, used as a second stain, does stain the various bacteria, micrococci, and bacilli of putrefaction a distinct blue, side by side with the bright red of bacilli of tubercle. For these observations I used a moderately strong watery solution of the methylene blue, having previously stained red with Dr. Heneage Gibbes' magenta liquid, or with a modification of it rather more convenient to prepare and quite as effective. This liquid was made with magenta or fuchsin, the latter being, if anything, the more brilliant. It is prepared by mixing half a drachm of pure aniline with seven drachms of spirits of wine, dissolving ten grains of fuchsin or magenta in this mixture, and adding an equal bulk of distilled water. The crystals are simply put into the bottle, which is then shaken. I have no reason to think that these exact proportions are the best, but they do very well. In this way the contrast may be very nicely shown in sputa; but my test observations were made upon young solid pulmonary tubercle from a spirit preparation, crushed with a little distilled water in an agate mortar, so as to produce a puriform-looking mixture, which was treated as a film in the ordinary way. With the above process, the film was shown to contain only tubercle bacilli stained red, and no septic bacteria could be shown by the ordinary stains used for them. The same pounded tubercle was then left for two or three days in a warm room, lightly covered, and then examined by the same process showed blue septic bacteria, micrococci, and bacilli, side by side with the red tubercle bacilli. In this putrefying tubercle ordinary stains for septic bacteria, such as methyl violet, showed them well, but not the tubercle bacilli. Gentian violet is not, I think, so nice a contrast, and therefore not so desirable for the second stain, as methylene blue, and has in respect of the

septic bacteria no special advantage so far as I can discover. Ehrlich, in his first paper (May, 1882) recommends blue as the contrast when red is used to stain the tubercle bacillus, and this led me to try the methylene blue among others. It seems to me the best of those which up to the present I have used. Dr. Heneage Gibbes' magenta liquid certainly has with me been much more effective than the original weaker anilin stains recommended by Ehrlich; but if one views the process as a whole, including the action of the acid upon the first stain, it is difficult to escape from the conviction that his process is essentially Ehrlich's improved. After using several acids of various strengths I have adopted, as the most convenient and best, nitric acid, one part, with four parts of water, rather than the one-to-two generally used, and first recommended by Ehrlich. A similar red staining solution may be made with magenta or fuchsin, using ammonia or potash instead of anilin; but although the bacilli of tubercle may thus be shown, they are neither so certainly nor so strongly stained as by the anilin solution. I find, as Mr. Prideaux does, that the washing in absolute alcohol and drying in air after the second stain may be dispensed with.—I am, Sir, your obedient servant,

Nottingham, Jan. 13th, 1883. W. H. RANSOM.

## "PICRIC ACID AND SUGAR TESTING."

*To the Editor of* THE LANCET.

SIR,—Dr. Pavy accuses me not only of ignorance of fundamental chemical principles, but also of "confusion in writing," and of introducing into this discussion "complexity and fallacy." Putting aside, therefore, all controversial language, I will simply make a plain statement of facts.

1. The absence of sulphide in a solution of albumen which has undergone prolonged boiling with potash is *not* due to gradual oxidation of sulphide by *air and moisture* during the boiling, for the same result is observed when the ebullition is conducted throughout in an atmosphere of carefully purified *hydrogen gas*.

2. If the sulphur of the albumen is eliminated at all in the gaseous state during ebullition with potash it is certainly not given off in the form of ammonium sulphide, or any other *volatile sulphide*; for when albumen and potash are boiled together in an atmosphere of hydrogen carefully purified, and the vapours and gases issuing from the boiling alkaline solution are conducted into a solution of lead, no black precipitate is formed in the lead solution, however long-continued the boiling may be.

In case anyone should be inclined to repeat this experiment with a view to test its accuracy, I may mention that the hydrogen was purified by passing through (1) a solution of corrosive sublimate and (2) a flask containing *boiling solution of potash* before it entered the flask containing the albumen and potash, which were also kept boiling, and finally the gas was conducted into an alkaline solution of lead hydrate. The lead solution remained clear and colourless throughout the experiment; and on testing the alkaline albumen, after boiling for three-quarters of an hour in the atmosphere of pure hydrogen gas, *no indication of sulphide* could be observed.

The *pure albumen* employed by me was made by the method of Wurtz, and at *no period* during the ebullition of this substance with potash could any evidence be obtained of the presence of sulphide in the cooled liquid, even by the application of the most delicate tests.

I, therefore, having employed every possible precaution, not with a view of introducing "complexity and fallacy," but with the object of avoiding otherwise inevitable error, most emphatically repeat my original statement, that no sulphide, either volatile or fixed, is produced when pure albumen is boiled with potash, and I make this statement without the slightest hesitation, in the firm belief that experiment will prove it to be true.

I am, Sir, yours truly,

G. STILLINGFLEET JOHNSON.

King's College, Jan. 20th, 1883.

## ANTHRAX.

*To the Editor of* THE LANCET.

SIR,—In an annotation in your issue of the 13th inst. you draw attention to the fact that, contrary to the generally received opinion, the placenta does not always constitute an impassable barrier to the passage of the bacilli of anthrax from the blood of pregnant animals to that of the fœtus. In corroboration of that statement I may tell you that during the past summer while investigating an outbreak of anthrax in a flock of forty ewes—produced by the carcass of an anthrax sheep buried in the pasture ground the previous summer—I found well-marked anthrax lesions in the fœtuses of three ewes which had succumbed to the affection; and not only this, one or two of the animals aborted and recovered: it was also observed that most of the ewes which had lambed before the symptoms of the disease were shown recovered and did well. This case only confirmed strongly the opinions I had previously entertained in reference to this matter.

I am, Sir, yours truly,

THOMAS WALLEY,
Principal, Royal Dick's Veterinary College.

Edinburgh, Jan. 19th, 1883.

## THE HOUNSLOW TRAGEDY.

*To the Editor of* THE LANCET.

SIR,—The jury empanelled to inquire how, and by what means, Dr. Wm. Whitfield Edwardes, late of Bath-road, Hounslow, came by his death, having returned a verdict which, as I have read the evidence, meets the just requirements of the case, I write to express the hope that the profession generally will give its opinion on this sad story. If this view meets with approval, the most practical and beneficial way in which we can express our sympathy with the survivors of Dr. Edwardes' family is to raise a fund for the benefit of his widow and children. I therefore, through your columns, ask the aid of my brethren for this object.

I am, Sir, yours truly,

Soho-square, W., Jan. 20th, 1883. JOSEPH ROGERS.

## A BRIEF SUMMARY AND DIGEST OF THE WORK OF THE DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY DURING THE YEAR 1882.

(*Communicated by* WILLIAM H. ROBERTSON, M.D., F.R.C.P., Consulting Physician to the Hospital, and Chairman of the Committee of Management.)

AT the annual meeting of the Committee of Management of the Devonshire Hospital and Buxton Bath Charity, Dr. Lorimer, the resident medical officer, and Mr. Craig, the clinical assistant, presented several tables analysing the work of the hospital during the past year. These tables appear to contain much that may be of general medical interest, and additional similarly suggestive details are in preparation. It may be hoped that these painstaking and capable medical residents will communicate these results to the profession, and possibly one or more of the able members of the acting medical staff will utilise the valuable case-books of the hospital for the public advantage; but, in the meantime, I venture to ask for space to make what I should be glad to find may be only a preliminary account of the experience derivable from the Buxton Rheumatic Hospital.

During the year 1882 there were 1856 in-patients received. Of these, 1340 were suffering from rheumatism proper, of whom 784 were males and 556 females; 17 were cases of gonorrhœal rheumatism, the whole of whom were males; 138 were cases of rheumatoid arthritis, of whom 12 were males and 126 females; 35 males were cases of gout, of which 12 were complicated with lead-poisoning; 19 were suffering from lead-poisoning apart from gouty complication, of whom 17 were males and 2 females; and 180 of the total patients received were suffering from other diseases, of whom 112 were males and 68 females. Of the 1340 cases of rheumatism proper, 2 males and 2 females were under ten years of age; 52 males and 57 females were from ten to twenty; 145 males and 126 females were from twenty to thirty; 157 males and 101 females were from thirty to forty; 173 males and 95 females were from forty to fifty; 128 males and 102 females were from fifty to sixty; 97 males and 59 females were from sixty to seventy; 29 males and 14 females were from seventy to eighty; and 1 male was upwards of eighty years old. The

liability of both sexes to rheumatism being apparently equal, probably only influenced in either sex by the greater exposure or other circumstances of the respective lives; the greater apparent liability of females to rheumatoid arthritis; the greater apparent liability of males to sciatica; the greater apparent liability of males to gout; and the greater apparent liability of males to suffer from lead-poisoning, probably simply due to occupation and contact with the poison—are so many possible inferences deducible from these results. That less than one-tenth of the total cases of the year should have been other than cases of rheumatic character, is an interesting record of this hospital. That there should have been comparatively few cases of rheumatism proper under twenty years of age; that the successive decades should have shown increasing liability from twenty to fifty years of age, have shown little declining liability to sixty years of age, and probably no real declination as life advances to older age—the lessening numbers only representing the smaller number of survivors, are probably well-known but not uninteresting inferences. In the 4 cases of rheumatism proper under ten years of age there was cardiac complication in every case. In the 109 cases from ten to twenty years of age, there was cardiac complication in 50 per cent. In the 271 cases from twenty to thirty, there was cardiac complication in more than one-fifth. In the 258 cases from thirty to forty, there were only 17 cases of cardiac complication. In the 268 cases from forty to fifty, there were only 20 cases of cardiac complication. In the 230 cases from fifty to sixty, there were only 13 cases of cardiac complication; whereas in the 156 cases from sixty to seventy, there were 22 cardiac cases. In the 138 cases of rheumatoid arthritis there was no case of cardiac complication. In the 139 cases of sciatica there was only one case of cardiac complication, in a male between sixty and seventy years of age. In the 35 cases of gout there was no case of cardiac complication.

Buxton, Derbyshire, Jan. 8th, 1883.

## NEWCASTLE-ON-TYNE.

*(From our own Correspondent.)*

AMONG the improvements recently introduced into Messrs. Tennant and Co.'s chemical works on the Tyne is the "Mactear Patent Continuous System Furnace." The advantages claimed for the new furnace are many, and if sustained by sufficient trial are likely to work a revolution in the chemical manufacture for which it has been introduced, the manufacture of sulphate of soda, or "salt-cake," as it is called in the trade, by the decomposition of common salt with sulphuric acid, which has hitherto been attended with costs and difficulties quite out of proportion to the simplicity of the process. The escape of hydrochloric acid gas led to endless loss and trouble, and the low-level escape of acid fumes amongst the workmen was a drawback which made the necessary hand-labour costly and difficult to procure. Many attempts have, during recent years, been made to produce a perfect salt-cake furnace, and the improvements effected on the oblong, single-bed reverberatory furnace have been many. The main result of these efforts has been the introduction of the double-chamber furnaces now in general use. The process of decomposing common salt by sulphuric acid for the production of salt-cake is conducted with the aid of intense heat, and it is well known that in the procedure there are two distinct stages, the creation of an acid sulphate, firstly, and, secondly, the decomposition of the rest of the salt by the action of this product. The furnaces at present in use consist of an iron pan in which the first part of the process is conducted, and an open reverberatory division in which the second, or perfecting stage, is gone through. When the furnace was charged, two-thirds of the salt might be counted upon as pretty certain to be decomposed in the pan, and the remainder in the calcining bed. The special excellence of Mr. Mactear's invention is said to be, that while it is in perfect harmony with this principle, yet it combines the pan and calciner in one, and makes the process of production a continuous one. Common salt is continually fed into the furnace chamber, and as continually manufactured salt-cake is dropped into trucks at the outlet end.

The local papers announce the death of Dr. John Dowson, which took place at Middlesbrough on the 6th of this month, in his 84th year. Dr. Dowson was well known in Whitby and district as a practising physician for nearly half a century. He was eminently a physician of a type fast disappearing, in small provincial towns at least; scholarly, leisurely, polite, ever ready for a conversation on the latest scientific book or theory, at the same time very suspicious about anything "new," and always ready with a classical or homely quotation to give force and point to his views. He had at one time a good practice in Whitby and neighbourhood, indeed, he was frequently called in to meet his brethren in many distant parts of Cleveland and North Yorkshire; but long before his retirement the advent of railroads and telegraphs changed much of this, and formal consultations became less and less frequent, patients getting off to Newcastle, Leeds, &c., for special advice and returning in less time than it formerly occupied to get medical men to meet from neighbouring towns but over hilly moorland roads, so that, like many others of the class of provincial physicians, he might be said to have outlived his vocation. Dr. Dowson published many years ago an "Essay on the Effects of Sea Bathing, &c." from the French of A. M. Gaudet, also an "Essay on Warm and Cold Bathing for the Preservation of Health." These were useful little works, and were deservedly popular with visitors to Whitby; they ran through several editions, and are still on sale at the local booksellers. Dr. Dowson was acknowledged to be an indefatigable "book hunter" as well as a book reader; indeed, the writer, whose knowledge of him extends back fully twenty-five years, has seldom seen him without a book under his arm. Dr. Dowson's memory was well stored with literary anecdotes and allusions. He was distinguished by the simplicity of his prescriptions, but at the same time he was most precise and minute as to diet and regimen with his patients, and generally successful in his treatment. He was much esteemed by a large circle of friends for his learning, urbanity, and intellectual tastes.

Small-pox having been prevalent at the favourite little Northumbrian watering-place of Alnmouth, the vicar writes to our local papers to say that the place has been quite free of the disease for seven weeks, and hopes that the village by next season may recover its wonted health, and popularity.

The Goyder memorial makes good progress, and I am told that the subscriptions amount to about £250.

By the death of Mr. Robert Ormston of Saville-row, in this city, our local charities have received very substantial bequests. Mr. Ormston died worth over £1,000,000 and the following medical charities are benefited. The Newcastle Infirmary £6000, the Dispensary £4000, the Hospital for Sick Children £2000, the Eye Infirmary £1000; other institutions come in for a share of the large amount he has left—namely, £19,000, to be distributed in this manner.

Newcastle-on-Tyne, Jan. 24th, 1883.

## NOTIFICATION OF INFECTIOUS DISEASES IN GLASGOW.

*(From a Correspondent.)*

IT is long since the Glasgow practitioner has encountered anything which has provided him with so much and so long-drawn-out excitement, as the proposal by the local authorities to compel him to report to the sanitary office the occurrence of infectious disease in his practice. It has afforded material for debate in medical and other societies, for motions, resolutions, deputations, general declamation, and argument, as well as a long, entertaining, and slightly acrimonious newspaper correspondence. The heather was first set on fire by the publication of the draft of the new Police Bill, which our municipal governors intended to push through Parliament at the earliest opportunity. The alarm was at once sounded, and the subject discussed (if almost unanimous denunciation of the proposed Bill can be called discussion) with unlimited vigour in the various medical societies of the city, till at last the Faculty of Physicians and Surgeons, watchful as ever of the interests of the profession, took the matter up, and appointed a deputation to represent to the Town Council the views and feelings of the profession in the matter, and offering as an alternative to the official scheme another plan, by which the medical attendant should be made to certify an infectious

case to the householder, the latter reporting to the sanitary authorities. This deputation was received with the courtesy due to it (though a certain "baillie" was heard to say something about medical trades-unionism), but was sent empty away. That very day the Council adopted in its entirety the principles of "dual notification" of infectious diseases—that is, compulsory notification of infectious disease by the householder, and by the medical attendant as well. Luckily for the citizens of Glasgow, both lay and medical, the Lord Advocate appeared on the scene at this juncture with the announcement that he had in preparation a Police Bill applicable to Scotland at large; and this, of necessity, gave the quietus to the Glasgow Bill, though some of the more ardent of the official spirits found comfort in the thought that Government may, after all, think it right to embody in their Bill the notification provision adopted by the Town Council. It is to be hoped Government will pay more heed to the voice of the profession than such a course would indicate. This did not end the matter, however; the subject was very far from being exhausted or fully utilised. A paper was read by a Glasgow practitioner before the local Philosophical Society (a lay Society worth cultivating, readily impressed by medical oratory, and an arena much affected by the Glasgow medico), dealing with the sanitary clauses of the proposed Bill, and bearing specially hard on the notification clauses. This gave rise to a long discussion, in which the subject was pretty thoroughly threshed out. Dr. Gairdner spoke eloquently, as usual, laying emphasis on the relation between doctor and patient which these notification clauses threatened to break up, and objecting to the doctor being dragged in to "peach" upon the householder; but he "made sport for the Philistines" by suggesting, and afterwards extending the idea in a newspaper letter, that the sanitary authorities should offer a reward, not exceeding a shilling, to every one who would give information of any case of infectious disease; that, in fact, the populace should be bribed and trained to "peach" on one another. It is not difficult to imagine how such a scheme would work in the lower strata of the population. Another speaker went further, and said he considered notification of infectious disease by the medical attendant not only a breach of confidence, but of the moral law. The same gentleman, rather than connive at the forcible separation of patients from their friends, would frankly advise such persons to hold their tongue about the existence of disease. Almost the only exponent of the official side of the question was Dr. J. B. Russell, who fought stoutly for his notification clauses. Professional opinion, however, was dead against him. Then came the inevitable newspaper war, reminding one of the "Battle of the Huns," where those who had been slain on earth were seen as spirits continuing the fight in the upper air. This correspondence lasted some weeks, and matters here were further complicated by the interference of Dr. Littlejohn of Edinburgh, who came to the defence of his pet notification scheme. Even this, however, did not improve the official position in the eyes of the profession in Glasgow; notwithstanding the reiterated claims that compulsory notification with dual responsibility had been "a success" in Edinburgh, practitioners here doubt this success, and find in the greater prevalence and higher mortality of infectious disease in Edinburgh during the last three years than in Glasgow during a similar period, distinct evidence that the concealment of infectious disease, which they so much fear, had actually largely been practised, and they are inclined to attribute this to the natural operation of these obnoxious notification clauses. Throughout this whole controversy the wrong arguments have been pressed on the public attention. It does little good to cry out "Privilege," or to complain of interference with merely professional rights and duties; if it can be proved that these are opposed to the public good, then they will have to go down, as they have gone down on previous occasions, before the demand of public necessity. The profession as a body are as anxious as the sanitary officials or the public that infectious disease should be stamped out, and the fact is on all hands admitted that in order to do this the very earliest information of the existence of such disease is necessary. But they think they have good grounds for believing that compulsory notification by the medical attendant will not ensure the obtaining of this early information, but that, on the contrary, it will do much to prevent it, especially among a large section of the poor, who instinctively do their utmost to evade official interference of any and every kind; that, in short, it will tend rather to defeat than to promote the end for which it is proposed. This is the only argument worth offering to the public, and, if properly advanced and supported, it would be all-sufficient.

P.S.—It is reported in Glasgow that Professor Gairdner's proposal that a reward should be given to anyone reporting a case of infectious disease has been adopted by the framers of the Government measure which is to apply to the whole of Scotland, but with this difference, that the sum so payable shall be half-a-crown instead of a shilling, and, further, that the medical attendant, if he report within twenty-four hours, shall be entitled to a fee of five shillings. If we could imagine such a proposal becoming law we might be tempted to rejoice at the prospect of easily-earned fees. It is highly improbable, however, that such a scheme, involving the likelihood of the expenditure of so much public money, will ever have the sanction of Parliament.

## SCOTTISH NOTES.

(*From our own Correspondent.*)

CONSIDERING the amount of attention which for many years has been bestowed upon the alleged overwork of railway servants, the result of the late strike on the Caledonian system must be very disappointing. The servants, with far too little consideration, scampered out, and were glad of a decent excuse to get back to work. The demands of the men were scarcely understood even by themselves; and the attempt to systematise the workings of a vast concern, which must be kept in motion during the whole twenty-four hours, has so miserably failed, that true grievances with regard to lengthened hours in isolated cases are likely to be overlooked. Individual experiences have been held up by the workmen as average statements, and this fallacy being exposed, the public decline to credit other assertions which are perfectly correct. Instances are easily found where men are shamefully overworked, and the lives of passengers consequently endangered; but the result of this strike seems to show that reform cannot thus be enforced, and that a gradual improvement can alone be ensured by the force of public opinion, by the temperate statement of workmen's grievances, and, possibly above all, by such costly accidents as the Pennilee disaster, brought about by an overworked signalman, and costing the company some £40,000.

A statement for which Mr. John Hunter, himself an analytical chemist, is responsible, may be commended to local authorities and the public represented by them. As a rule, when a water-supply is suspected of containing ingredients harmful to health a favourable analysis is deemed by these bodies quite sufficient proof that the poison is elsewhere, and they resolutely close the municipal ear against hygienists, who know that fever germs may thus escape detection.

Dr. Turnbull, medical superintendent of the Fifeshire Asylum, has had, at the end of his first year, his salary raised from £350 to £400 a year. The chairman, in proposing the increase, was very complimentary towards Dr. Turnbull. At the same meeting of directors a committee was appointed to consider the best method for the introduction of a water-supply with increased pressure as a surety in case of fire.

Notwithstanding the presence of an epidemic of scarlet fever during the year, Dr. Murray is able to report the low death-rate of 15 per 1000 in Forfar, which is a manufacturing town, and one of a class in Scotland in which the death-rate is generally very high. There is an excessive mortality among children under one year, and this Dr. Murray attributes to insufficient care and improper feeding of children, whose mothers are occupied in the factories. It appears that a similarly high mortality in this class has formerly been noticed in Forfar.

The town of Banff has determined upon introducing a new water-supply at a cost of £6000.

Dr. Macadam met the Dundee Water Commissioners on Monday, and discussed with them his recent report on the necessity of filtering the Monikie water prior to its use in supplying the town. The meeting can have served small purpose, and the question remains just where it was, Dr. Macadam still asserting that, though the water is of

excellent quality and thoroughly wholesome, he is clearly of opinion that it should be filtered. A large minority object to spending the necessary £15,000 upon such a recommendation, while the public generally fail to understand how a water containing such an enormous supply of vegetable spores and flukes as are, according to Dr. Macadam, present in the unfiltered water can be safe for domestic use. These organic particles might naturally deposit and increase in cisterns, and so become dangerous, especially in summer; but it seems that Dundee is in the happy condition of having no connexion between the cisterns and the supply of water for cooking purposes, and, consequently, no such danger need be dreaded. Laying aside the analyst's opinion, that the vegetable débris is quite innocuous, where such is so abundantly present that the sense of sight is offended, surely the water would be much improved by filtration, and such a view will likely be taken by the authorities of Dundee.

## NEW YORK.

*(From our Correspondent.)*

THE year closes with the publication of some excellent works on Histology and Anatomy by the American publishing houses. I will briefly refer to some of them to which my attention has been drawn, and as my task is descriptive and not critical, I will leave any expression of opinion as to the merits of the works to the authorised reviewer.

Messrs. J. W. Vail & Co., New York, publish a work on "Microscopical Morphology of the Animal Body in Health and Disease," by Dr. C. Heitzmann. This is a handsome volume of about 850 pages and illustrated in a manner that leaves no room for improvement, with 380 original engravings made from drawings by the hand of Dr. Heitzmann. As Dr. Heitzmann is a skilled professional microscopist and an excellent draughtsman, the work must be esteemed a valuable one, if only as a record of histological work, which the author claims to have occupied ten years of intense labour. Had Dr. Heitzmann merely recorded the result of his microscopical observations, the work would doubtless have been received as an authority on the subject and proved highly acceptable to students following this line of research. But Dr. Heitzmann has assumed the *rôle* of a reformer, and aims to overthrow the cell theory and modern views on protoplasm and living matter, presenting in their place original theories of his own, and urging on the reader facts and conclusions which he is not sanguine will meet the approval of professional microscopists. The whole work is based on the assertion that protoplasm consists of a number of granular bodies from which radiate delicate greyish threads, the ends of which blend with other granules, so as to convey the idea of an extremely delicate network, the outer contour (an amœba, quoted as an example), consisting of a continuous thin layer of a slightly shining substance, into which also penetrate filaments from the granules. Dr. Heitzmann observes this structure in the amœba, the red and white blood-corpuscles, and in all forms of protoplasm and living matter. This reticular structure in the hands of Dr. Heitzmann enables him to explain the phenomena of the development of living matter, and many of the mysteries of organised life. He appears to have established in this city a school of microscopists who are devout believers in his theories, while the larger number of histologists give Dr. Heitzmann's conclusions a cold reception and exhibit a want of faith which must be distressing to one imbued with so much enthusiasm. Dr. Heitzmann's book includes papers by about twenty microscopists, who may be termed his disciples; many of these show undoubted talent, and are valuable contributions to the literature of the subjects treated. Dr. Heitzmann labours under the difficulty of writing in what to him is a foreign language. He is apparently unconscious of the necessity for submitting his manuscripts to the revision of one who is a scholar of the English language. This self-confidence has led him into errors of expression which not only make his explanations difficult to follow, but has caused him to make declarations which have brought him within the toils of the American reviewers. One critic, who confesses that Dr. Heitzmann probably does not intend to convey such "notions," draws attention to the fact that in the work reviewed the office of the ovary is said to be the production of a principle, this principle being the ovum, this ovum being called an organ, and the organ a vesicle. This work is not a manual of histology, nor intended as such, but the student cannot fail to receive many aids to his study by perusing the book.

"A Manual of Histology," edited by Dr. Thomas E. Satterthwaite, Professor of Histology in the New York Post-Graduate Medical College, published by William Wood and Co. of New York, second edition, is a work of a different character to the one just described. I believe this work is already known in Europe as well as in this country, where the author holds a high place among investigators in this department of original research. Dr. Satterthwaite has no startling theories to elaborate, but is thoroughly practical in all that he offers. The methods of one who has for years made histology his daily occupation must surely prove valuable to those engaged in similar work. The cumulative work of others and the whole literature of the subject have been tested by him, and all that proved valuable and useful has been here reproduced and explained, in the light of his own experience, for the benefit of future students. After explaining his methods, Dr. Satterthwaite takes the reader through a course of practical histology, and finally introduces over twenty original papers by physicians who have associated themselves with the author in producing this work.

Professor Burt G. Wilder, M.D., of Cornell University, in conjunction with Professor Simon H. Gage, B.S., of the same university, has produced a new manual on Anatomy, which will be of considerable service as a class-book, and to those who endeavour to acquire by unaided study a knowledge of the subject. The title of the book is as follows:—"Anatomical Technology as applied to the Domestic Cat, an Introduction to Human, Veterinary, and Comparative Anatomy." The work is published by Messrs. A. S. Barnes and Co. of New York. There are many reasons for making use of the cat for anatomical purposes in preference to other animals, and as the adult human subject is inconveniently large, and not easy to obtain, the course of study offered by Professor Wilder may be followed with advantage by medical students as a preliminary training in anatomical manipulations. The work of Mr. St. George Mivart, "The Cat," &c., is an admirable monograph, and describes the entire structure of the animal. It, however, makes frequent and wholly unspecified substitutions of human anatomy for that of the cat, and gives no practical directions for the student. Professor Wilder does not assume any previous knowledge on the part of the reader, but as a practical teacher leads the student from the simple to the complex, and offers a preliminary training in the best methods of preparation and preservation, which is worthy the study of all engaged in such investigations. Nearly one hundred and fifty pages are devoted to Professor Wilder's methods, and knowing as I do his skill in this department, I suggest that no higher model for the perfect construction and equipment of a dissecting studio can be found than the one he describes. The work is profusely illustrated with original drawings made specially for this purpose, and they may be relied on as accurate. Perhaps minor errors of observation and interpretation may be found in the text; but I think the reviewer who critically examines this work will have some difficulty in tracing inaccuracies of any magnitude.

New York, December 30th, 1882.

# Obituary.

## SIR JOHN FORSYTH, K.C.S.I., C.B.

BY the death of Sir John Forsyth, Honorary Physician to the Queen, the Indian Medical Department has recently sustained the loss of one of its noblest ornaments. He died at West Brighton on the 14th inst., having nearly attained his eighty-fourth year. Upwards of forty years of his active and useful life were spent in Indian service, unbroken by furlough to England. His first appointment to the Bengal Medical Department was dated October, 1819. In 1838 he was appointed senior surgeon to the force serving under Shah Shoojah-ool-Moolk, and was present at the first capture of Ghuzni. In 1841 he served with the force sent under General Sale to clear the passes through the Ghilzee country to Jelalabad, and was present at all the actions fought in

the course of that march. He was Principal Medical Officer to the party which sustained the siege of Jellalabad, and after it was raised on the 7th of April, 1842, he joined General Pollock's army, and was present at all the actions fought by it between Jelalabad and Cabul. For his services in Afghanistan he received three medals. In 1843 he was appointed Secretary to the Medical Board. In 1852 he was appointed Apothecary-General. He held this important office until late in 1853, when he was promoted to the rank of Superintending-Surgeon, and was posted to the Pegu circle. In April, 1857, he was posted to the Meerut circle, and reached Meerut three days before the mutiny broke out. He was then appointed Director-General of the Bengal Medical Department, the arduous duties of which office he performed until the close of the mutiny. In 1861 he was appointed Honorary Physician to the Queen, being the first who attained that distinction in India. In April, 1862, after forty-one years and eleven months' uninterrupted work in India he retired from the service, the Governor-General notifying in the *Gazette*, among other expressions of unqualified approval, that "Dr. Forsyth's career has been one of continued usefulness and honour." In 1862 he was created a Companion of the Bath, and in 1881 the dignity of Knight Commander of the Star of India was conferred upon him. Few men have ever been more thoroughly qualified than he was for hard work and high command in India. Of fine constitution, great physical power, a noble presence, and endowed with the highest moral and physical courage—wise, just, and moderate—he was a born leader of men. His manner was reserved; he was not of ready and fluent speech; Nature had given him a warm temper, which he held under strong control; but reticent as he was, one who knew him intimately, and worked with him for years, writes:—"Every word he uttered was to the purpose, decisive, and pointed. His judgment in all official matters was excellent, although he was by no means quick in deliberation. His reticence covered a heart of the most affectionate kindliness, generosity only limited by his means and his perfect conscientiousness, and a deep but unostentatious religious faith and practice."

## RICHARD HENRY PRIOR, M.D.

DR. PRIOR, whose death, on the 4th inst., from heart disease, at the early age of thirty-seven, we announced last week, was a distinguished student at King's College, and having taken the diplomas of L.R.C.P., M.R.C.S., L.S.A., and, later on, the degrees of M.D. and Ch.D., in 1869 settled in St. Albans, where his skill and attention to his patients soon gained for him an extensive practice. He held several public appointments, being one of the honorary medical officers to the St. Albans Hospital and Dispensary, for some time medical officer of health for St. Albans, and medical officer to the second district of the St. Albans Union. In 1875 he was a successful candidate for municipal honours, being returned second on the poll, and he served the town in the capacity of councillor for several years. In 1877 he was elected Mayor of St. Albans, and in that capacity discharged the duties in the council chamber and on the city bench which fall to the lot of the chief magistrate with dignity and tact. He was a member of the School Board from its formation and was its first chairman, a member of the Public Library and School of Art Committees, and a director of the St. Albans Building Society. He was, too, we understand, one of the gentlemen just appointed by the Lord Chancellor to the post of J.P. for the city of St. Albans. He was a man of large sympathy and generosity, and among the poor was held in high esteem.

## JAMES GARSTANG, F.R.C.S. ENG.

MR. JAMES GARSTANG died on the 15th instant at his residence at Lytham, after a protracted illness. He was a pupil of Messrs. Lodge and Walton, of Preston, and in 1827 became a Licentiate of the Society of Apothecaries, and in 1828 took the M.R.C.S. diploma. In 1852 he was elected an Honorary Fellow of the College of Surgeons. Mr. Garstang commenced practice in Clitheroe, and only about ten years ago removed to Lytham, where his practice lay chiefly amongst his personal friends. He was for many years a magistrate for the county, and he also acted as one of the Local Improvement Commissioners up to the time of the change in the constitution of that Board.

## ROYAL COLLEGE OF PHYSICIANS, LONDON.

AT an ordinary meeting of Fellows, held at the Royal College of Physicians on the 25th instant, the President, Sir William Jenner, referred with deep feeling to the loss the College had sustained, since its last meeting, in the death of Sir Thomas Watson, and suggested that the Fellows should pass a resolution expressing the extraordinary sense they had of the high merits of Sir Thomas Watson and the obligation they owed to him as a body. The proposal was unanimously adopted, and the resolution when drawn up will be forwarded to the immediate relatives. The following councillors were elected: Drs. Quain, Balfour, Ogle, and Sir H. Cooper, M.D., in the room of Drs. Wilks, Stone, Buchanan, and Fox, who go out of office. A communication was read from Sir Chas. Dilke relative to the International Colonial and Export Trade Exhibition, to be held at Amsterdam during May and October, 1883, containing information relative to the programme of the Section for Colonial Medicine. The annual Report of the Examiners was then read. It is satisfactory to record that the number of candidates presenting themselves for examination is every year increasing. The year included in the present report shows an increase of 40 per cent. over its predecessor. Reports were also presented from the Sanitary and the Finance Committee. A discussion arose on the adoption of the Treasurer's report with regard to the insurance of the College building and contents from fire. It was thought that no sum of money could represent the professional, and even national, value of many of the works and reliques of the past collected within its walls. It was eventually arranged that an opinion should be taken as to the best means of securing against the contingencies of fire, or of promptly dealing with it if it occurred. The last business on the agenda was the most important. It was to consider a recommendation (1) to institute a special examination on the subject of Hygiene, or State Medicine; (2) to institute a special examination on the subject of Psychological Medicine; the Council stating in their report that the scheme would confer a great benefit on the public and supply a much-needed want in the profession. Some discussion arose, but the hour was so late that the subject was adjourned for further consideration till the next meeting.

# Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen passed the Second Examination for the licence (Anatomy, Physiology, &c.) on Jan. 22nd:—

Caskey, John Shaw. | Jones, John.
Davies, Ivor Henry. | Kent, George Dugan.
Matarin, Benjamin Allen.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on Monday last:—

Armstrong, A. J. Mackenzie, L.R.C.P. Ed., Chippenham-road.
Atkinson, William, M.D. Qu. Univ. Irel., Camden Town.
Black, William Jones, L.S.A., Manchester.
Burman, F. James, Wath, near Rotherham.
Chadwick, John, L.S.A., Rochdale.
Davies, John Thomas, L.R.C.P. Ed., Rhyl, North Wales.
Fink, George Herbert, L.S.A., Regent's Park College.
Fletcher, John, L.S.A., Manchester.
House, P. W. M'Dowall, L.S.A., Barking-road.
Hudson, O. Henderson, Sheffield.
Jackson, John Wm., L.R.C.P. Ed., Fulford-road, York.
Jones, Arthur, Ormskirk.
Kees, Arthur, L.R.C.P. Ed., Woburn-place.
Liptrot, Alfred Bailey, Wigan.
Logan, Robert, M.D. M'Gill Coll., Michigan.
Mead, Rivis, M.B. Ed., Whitby.
Owen, J. F. Holland, Rainhill, Liverpool.
Rowell, Robert Henry, L.S.A., Houghton-le-Spring.
Young, John More, M.B. Glas., Rothwell, Northampton.

The following gentlemen were admitted Members of the College on Tuesday last:—

Arthy, G. F. Seaman, Manchester.
Buck, Lewis Archer, Newmans-row.
Gresswell, Albert, Louth, Lincolnshire.
Holt, Henry Lyttleton, L.R.C.P. Ed., Devonshire-place.
Holton, Richard, L.S.A., Lincoln.
Hunt, Edwin Guy, Halesowen.
Lane, Benjamin Hugh, L.R.C.P. Ed., Victoria-street.

Marsden, James Aspinall, Camberwell.
Rands, St. John Outlaw, Northampton.
Salter, Stephen Thomas, Woburn-place.
Unitt, James Arthur, L.R.C.P. Ed., Walsall.
Ward, Anthony Arthur, Walpole-street.
Williamson, H. Holdrich, Mildmay Park.
Wilson, Alexander, Manchester.

The following gentlemen were admitted Members of the College on Wednesday last:—

Albert, Henry Louis, Sloane-street.
Bernays, Adolphus Vaughan, M.B. Cantab., Birmingham.
Brodie, Charles Gordon, Isle of Wight.
Davidson, Hugh Morgan, L.R.C.P. Ed., Aldeburgh.
Davy, Thomas George, Exeter.
Dowson, Walter, Upper Chadwell-street.
Dyer, Sidney Reginald, Harlesdon.
Frampton, Fredk. Thos., L.R.C.P. Ed., Gloucester-terrace.
Harrison, Charles, L.S.A., Braintree.
Keatinge, Henry Pottinger, Trinity-square.
Muirhead, M. Alexander, Jamaica, West Indies.
Orford, John, L.R.C.P. Lond., Ipswich.
Owen, Herbert, Coventry.
Payne, I. Rowland, L.R.C.P. Ed., Coleford.
Pearse, Frederick Edward, Frome, Somerset.
Power, Charles John, L.R.C.P. Lond., Torquay.
Roughton, E. Wilkinson, Brook Green.
Saneyoshi, Yasurzumi, Tokio, Japan.
Sparkes, Claude Stephen, L.S.A., Guildford.
Targett, James Henry, Idmiston, Wilts.
Tunzelmann, E. Waldemar von, Wimbledon.
Williams, Arthur John, Charterhouse-square.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 17th inst.:—

William Nicholls, St. Bartholomew's Hospital; Marcus G. Yunge-Bateman, Arthur G. Mossop, Thomas S. Jones, and Sidney A. Mugford, Guy's Hospital; Charles R. Hodges, William J. Essey, and Frederick D. L. Enson, King's College; John W. Cooper and Walter H. Burrows, Charing-cross Hospital; Thomas S. Tuke and Allen F. Duke, St. George's Hospital; Rudolph de Cordova and Arthur Shaw, University College; Frederick C. H. Piggott, Cambridge; William R. H. Hains, Westminster Hospital; John S. Edye, St. Thomas's Hospital.

Of the 190 candidates examined during the past fortnight, 38 failed to satisfy the Board, and were referred for three, and 7 candidates for six, months' further anatomical and physiological study.

UNIVERSITY OF CAMBRIDGE. — At a Congregation held on the 17th inst. the degree of M.B. was conferred on the following gentlemen:—

Thomas Babington Grimsdale, Trinity.
John Ernest Howe, Clare.

APOTHECARIES' HALL. — The following gentlemen passed the examination in the Science and Practice of Medicine, and received a certificate to practise, on Jan. 18th:—

Butler, Francis Henry, Paddington Green.
Verity, Herbert Wm. Steele, Cheltenham.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Henry Bird, University College Hospital; William Edward Newey, Middlesex Hospital.

MR. JOHN HAMILL has left £50 to the Belfast Royal Hospital, and a donation of a like sum has been given by Mrs. Bell to the same institution.

WARREN DIAMOND, M.R.C.P., M.R.C.S., &c., Senior Honorary Medical Officer of the Brixton, Streatham, and Herne Hill Dispensary, has resigned, after giving his services for twenty-five years.

IT is stated that the late Mr. Thomas Laing, of West Calder, has left the residue of his estate, which will probably amount to about £30,000, to the Edinburgh Royal Infirmary.

A LODGING-HOUSE keeper in Liverpool was a few days ago fined £5 for having allowed persons to occupy a bed from which a woman suffering from typhus fever had been removed, the bed not having been disinfected in the interval.

AN anonymous friend of the Sick Children's Hospital, Aberdeen, has given, through Sheriff Dove Wilson, the sum of £1000, to be applied towards the creation and maintenance of the proposed wards for the treatment of infectious diseases.

THE report read at the annual meeting of subscribers to the Children's Hospital, Birmingham, on Monday, showed that the total number of patients relieved during the year was 13,724, of whom 734 were in-patients, 12,928 out-patients, and 62 home patients—an increase over the previous year. The expenditure of the year had been £4107 11s. 5d., and the income £3884 0s. 2d.

THE Sanitary Committee of the Leeds Corporation met on the 22nd inst. to consider the report of the sub-committee appointed to visit the various rubbish "tipping" places in connexion with the borough. We alluded to the present mode of disposal of night-soil in Leeds in a recent number.

AT the ninety-fourth annual general meeting of the governors and friends of the City Dispensary votes of thanks were accorded to the medical officers for their valuable services, and on the motion of Mr. Williams, it was resolved that an honorarium of £50 be given to each of those gentlemen.

THE HUNTERIAN ORATION.—The President and Vice-Presidents of the Royal College of Surgeons have just issued invitations to the biennial oration on Wednesday, the 14th prox., which will be delivered by the President of the College, Mr. T. Spencer Wells, in the theatre of the institution at three o'clock. The Hunterian Festival, to which several distinguished guests have been invited, will be given in the Library on the same evening.

THE thirtieth annual meeting of the subscribers to the Leeds Hospital for Women and Children was held on the 18th inst. at the hospital. During the year ending Dec. 31st, 1882, 1694 patients had been treated. Of these 382 were in-patients and 1312 out-patients. The working of the hospital has been satisfactorily carried on, but the finances were not in as flourishing a condition as could be desired, and increased activity in collecting subscriptions was urged.

A MEMBER of the body called the Peculiar People was handed over to the police on Monday on the Southwark Coroner's warrant for allowing his child, aged three years, to die from lung disease and ulceration of the bowels without obtaining medical assistance. Another case of the same kind was before the Lambeth police magistrate on Tuesday, but the evidence was not sufficient to incriminate the accused, who was accordingly liberated.

THE annual meeting of the governors and subscribers of the Convalescent Home for Poor Children, situated on the West Hill, St. Leonards, was held on the 17th inst. The Committee reported that the total number of admissions for the whole year was 513, and of these 400 were from London and the suburbs, thirty-five from Kent, twenty-five from Surrey, twenty-one from Sussex, and the remainder from various parts of the country. The financial condition of the institution was stated to be satisfactory.

# Medical Appointments.

*Intimations for this column must be sent* DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ARMSTRONG, JAMES, M.B., L.R.C.S.Ed., has been reappointed Honorary Physician to the Liverpool Infirmary for Children.

BARRS, ALFRED G., M.D.Ed., M.R.C.S., has been appointed Honorary Physician to the Leeds Public Dispensary and to the Leeds Fever Hospital, vice Dr. Eddison, resigned.

BATTLE, W. H., F.R.C.S., has been reappointed Surgical Registrar to St. Thomas's Hospital.

COLBORNE, HENRY, M.R.C.S., has been reappointed Surgeon to the Hastings Dispensary.

COLGAN, FRANCIS PHILIP, L.R.C.S.I., L. & L.M.K.Q.C.P.I., has been appointed Physician to Bagnalstown Fever Hospital, vice C. D. Allen, M.D., resigned.

DEVIS, C. J., M.R.C.S., L.S.A.Lond., has been appointed one of the Surgeons to the District Hospital, Charters Towers, Queensland.

EVERSHED, MONTAGUE F., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer and Vaccinator for the District of Bega, New South Wales.

FOORD-CLARK, HENRY, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Government Medical Officer at Stainthorpe, Queensland.

GAYTON, FRANCIS CARTERET, M.B., C.M.Aberd., M.R.C.S., Assistant Medical Officer to the County Asylum, Bodmin, Cornwall, has been appointed Senior Assistant-Physician to the Surrey County Asylum, Brookwood.

GREALY, FRANCIS, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer to the Workhouse and Fever Hospitals, Galway Union.

HUMBLE, GEORGE A., M.D., M.R.C.P.Lond., has been appointed Physician to the Sociedad Universal de Socorros Mutuos y Beneficencia de Patagones, Argentine Republic, South America.

KING, DAVID ALEX., M.B.Lond., M.R.C.P., [not M.R.C.S., as stated last week] has been appointed Casualty Physician to St. Bartholomew's Hospital, vice Kidd, whose appointment has expired.

LEAPINGWELL, EDW. JODRELL, M.B., C.M.Ed., has been appointed Medical Officer for the Ipstones District of the Cheadle Union.

LOWE, GEORGE, M.B. St. And., L.R.C.P.Ed., has been appointed Medical Officer for the Third District of the Henstead Union.

MAKINS, G. H., F.R.C.S., has been appointed Resident Assistant-Surgeon to St. Thomas's Hospital, vice B. Pitts, F.R.C.S., resigned.

PITTS, BERNARD, M.A., M.C.Cantab., F.R.C.S., has been appointed Assistant-Surgeon to St. Thomas's Hospital.

RAWDON, H. GREENWOOD, M.D. St. And., L.R.C.P.Ed., M.R.C.S., has been reappointed Honorary Surgeon to the Liverpool Infirmary for Children.

RICE, PATRICK MAGENIS, M.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Galway Dispensary.

SHORTER, H. GOLDSWORTHY, M.R.C.S., has been reappointed Surgeon to the Hastings Dispensary.

SIBBIT, Mr. ROBERT S., has been appointed Medical Officer for the Stamfordham District of the Castle Ward Union.

SMITH, R. P., M.D.Lond., has been appointed Resident Assistant-Physician to St. Thomas's Hospital, vice C. E. Sheppard, M.D.Lond., resigned.

SMITH, T. F. HUGH, F.R.C.S. & L.S.A.Lond., has been appointed Medical and Surgical Registrar to the Victoria Hospital for Sick Children, Chelsea.

# Births, Marriages, and Deaths.

## BIRTHS.

BARR.—On the 20th inst., at Lynnewood House, Rishton, Blackburn, the wife of John Barr, M.B., of a daughter.

GREATHEAD.—On the 19th ult., at Graham's Town, South Africa, the wife of J. B. Greathead, M.B.Ed., M.R.C.S., of a daughter.

HEDDY.—On the 22nd inst., at 25, Hollywood-road, South Kensington, the wife of William Jackson Heddy, M.R.C.S.E., of a daughter.

LITTLE.—On the 20th inst., at The Elms, Victoria-park, Manchester, the wife of David Little, M.D., of a daughter.

NANKIVELL.—On the 12th ult., at Butterworth, Transkei, South Africa, the wife of J. H. Nankivell, M.R.C.S., of a son.

PRINGLE.—On the 20th inst., at Angelton, Bridgend, the wife of H. T. Pringle, M.D., Medical Superintendent of the Glamorgan County Asylum, of a son.

SELF.—On the 20th inst., at Pembury-road, Clapton, the wife of James Self, M.D., of a son, who survived his birth only a few hours.

WALKER.—On the 16th inst., at The Elms, Parkhurst, Isle of Wight, the wife of George E. Walker, L.R.C.P., of a son.

YOUNG.—On the 13th inst., at Rose Bank, Merton-road, Bootle, Liverpool, the wife of T. Frederic Young, L.K.Q.C.P.I., M.R.C.S., of a daughter.

## MARRIAGES.

CALDER—MILLER.—On the 16th inst., at St. John's Episcopal Church, Perth, Augustus Barclay Calder, M.D., of Perth, to Eliza Anne (Lila) Miller, eldest daughter of John M. Miller, of Mayfield, Solicitor, Perth.

CARDEN—ROYLE.—On the 18th inst., at the Parish Church of Heversham, Westmoreland, John Condell Carden, L.R.C.P.Edin., to Florence Nightingale, youngest daughter of Octavian Newcome Royle, M.D., F.R.C.S.Eng.

PINKERTON—DREW.—On the 13th inst., at All Saints' Church, Upper Norwood, Charles Pinkerton, M.D., Southport, son of John Pinkerton, Esq., of Millerston, to Evelyn Sophia, youngest daughter of the late Rev. G. S. Drew, Vicar of Holy Trinity, Lambeth.

SCOTT—BEALEY.—On the 18th inst., at St. James', Cheltenham, John Halliday Scott, M.D., Professor of Anatomy, University of Otago, New Zealand, to Helen Gardiner, eldest daughter of the late John Bealey, of Canterbury, New Zealand.

SMITH—WALTERS.—On the 17th inst., at Holy Trinity Church, Winchester, by the Rev. John Vodin Walters, M.A., Vicar of St. Columba's, London, formerly Rector of St. Martin's, Salisbury, and cousin of the bride (her father and also the Rev. Geo. A. Seymour, M.A., Rector of the Parish, taking part in the service), James Snowden Smith, M.R.C.S.L. & L.R.C.P.Ed., of St. Austell, Cornwall, and son of Mr. Geo. Smith, Solicitor, of Westbourne, Salisbury, to Frances Mary Flamstead, elder daughter of the Rev. Alfred Vaughan Walters, B.A.Oxon., formerly Curate of Amesbury and Allington.

TUKE—WYLDE.—On the 12th ult., at St. John's Church, Grove-park, Chiswick, by the Rev. Lawford Dale, M.A., Vicar of Chiswick, assisted by the Rev. Thornhill Webber, M.A., Vicar of St. John the Evangelist, Holborn, Charles Molesworth Tuke, M.R.C.S., third son of Dr. Tuke, of The Manor House, Chiswick, and Albemarle-street, London, to Mary Ella, second daughter of William H. Wylde, Esq., C.M.G., of Westfield, Putney, Lieutenant-Colonel, 2nd South Middlesex Volunteers.

## DEATHS.

BLACKMORE.—On the 20th inst., at Byrom House, Quay-street, Manchester, Edward Blackmore, F.R.C.S., aged 75.

DICKINSON.—On the 13th inst., at Hartington Villas, Ealing Dean, W., Deputy Surgeon-General J. E. Dickinson, of the Madras Army (Retired), in his 58th year.

DUKE.—On the 18th inst., at Meerut, from an accident, Surgeon-Major William A. Duke.

MASON.—On the 18th inst., at Sunnyside, Ayr, James Lindsay Mason, M.D., of Brailsford, Derby, only son of the late James Mason, M.D.

PARSONS.—On the 22nd inst., at Ivanhoe House, Newhaven, Sussex, after a few days' illness, Elizabeth Annie Broadbent (Lillie), the fondly loved and loving wife of Charles Parsons, L.R.C.S.I. & L.K.Q.C.P.I., L.M., aged 31.

PAULL.—On the 18th inst., at Leman-street, Truro, Alexander Paull, Surgeon, within eight days of completing his 70th year.

**N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.***

## METEOROLOGICAL READINGS.

*(Taken daily at 5.30 a.m. by Steward's Instruments.)*

THE LANCET OFFICE, Jan. 25th, 1883.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Dry Bulb. | Wet Bulb. | Solar Radiation in Vacuo. | Max. Temp. Shade. | Min. Temp. | Rain fall. | Remarks at 5.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Jan. 19 | 30·33 | E. | 41 | 41 | .. | 51 | 37 | ·04 | Foggy |
| ,, 20 | 30·21 | W. | 50 | 48 | .. | 51 | 37 | ·03 | Overcast |
| ,, 21 | 30·41 | W. | 47 | 46 | .. | 50 | 42 | .. | Overcast |
| ,, 22 | 29·50 | E. | 43 | 41 | .. | 45 | 39 | .. | Overcast |
| ,, 23 | 30·73 | S.E. | 35 | 34 | .. | 40 | 31 | .. | Hazy |
| ,, 24 | 30·33 | S.W. | 34 | 32 | .. | 42 | 28 | .. | Hazy |
| ,, 25 | 29·64 | W. | 38 | 36 | .. | 43 | 31 | .. | Overcast |

# Medical Diary for the ensuing Week.

### Monday, Jan. 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Whipham, "On a Case of Acute Pulmonary Tuberculosis (to open a discussion on the association of Tuberculosis and Bacilli)."

### Tuesday, Jan. 30.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

ROYAL INSTITUTION.—3 P.M. Professor W. C. Williamson, "On Primæval Ancestors of Existing Vegetation."

### Wednesday, Jan. 31.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

### Thursday, Feb. 1.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On the Spectroscope and its Applications."

HARVEIAN SOCIETY.—Mr. W. H. Lamb, "On a Case of Pleuro-pneumonia."—Mr. H. C. Stewart, "On Fevers and Exanthems Treated by Antiseptics."

### Friday, Feb. 2.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Metamorphosis of Sustorial Fishes and Batrachia."

ROYAL INSTITUTION.—3 P.M. Sir Wm. Thomson, "On the Size of Atoms."

### Saturday, Feb. 3.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. R. Bosworth Smith, "On Sir John Lawrence and the Mutiny, 1857."

# Notes, Short Comments, and Answers to Correspondents.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*All communications relating to the editorial business of the journal must be addressed "To the Editor."*

*Lectures, original articles, and reports should be written on one side only of the paper.*

*Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.*

*We cannot prescribe, or recommend practitioners.*

*Local papers containing reports or news-paragraphs should be marked.*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *to be addressed "To the Publisher."*

FORTY INCHES OF BOWEL PASSED PER RECTUM, WITH RECOVERY.

AT a recent meeting of the Baltimore Academy of Medicine, Dr. Christopher Johnston exhibited a specimen of forty inches of intestine passed by a lady in Charles County, Md., per rectum, which, together with notes of the case, had been sent to him by Dr. W. N. Saunders, under whose care it occurred. The patient, who was thirty two years old, married, and had one child, had always been delicate, and subject to indigestion, constipation, and colic pains. The attack during which the present specimen was passed began with acute epigastric pain, followed in three days by stercoraceous vomiting, which produced slight relief of the pain. For nine days previous to the vomiting there had been no action from the bowels, and a circumscribed hardness could be easily felt through the abdominal parietes. After the vomiting, which lasted three or four days, the sphacelated bowel, together with some of the omentum, was passed. Part of the specimen retained its tubular shape, and contained fæces; another part passed mixed with fæces. The patient then began to improve, although still troubled with occasional pain in the bowels, especially in connexion with her evacuations. The treatment pursued was cathartics, enemata, inflation, anodynes, &c. The specimen was supposed to be a portion of the ileum.

## GROCERS' LICENCES.

*To the Editor of* THE LANCET.

SIR,—Having, with you, felt strongly on this most important subject from the very outset, I was rejoiced to peruse your able article of the 6th inst. pertaining to it, and at the bold way in which you have spoken out in the same. There having been lately a good deal of discussion in the columns of the *Manchester Courier* on the above subject, kindly accord me brief space in your next impression to express a few observations by way of full endorsement of your views.

In considering this important matter, I apprehend it is scarcely a question as to whether, as a correspondent remarks, "grocers' licences for the sale of spirits escape litigation under cover of a pretty label or coloured capsule with the strength marked on it," so much as whether these licences are not altogether perfect abominations to temperance, and very traps and snares to, at least, the women portion of the community. Common-sense and reason say, "Yes." In order to give reciprocity to the late French treaty, there would have been no harm to have allowed claret to have deluged every shop in the kingdom, and there would have been the limit; but to have allowed, by Gladstone's iniquitous Grocers Wine Licences Bill, these traders to usurp the legitimate business of wine merchants, licensed victuallers, &c., and so, further, to sow broadcast intemperance in our midst (among women especially), was, to say the least, a most unwise and mischievous piece of legislation, which ought at once to be rescinded. The Salvation and Blue Ribbon armies ought to marshal a crusade against these licences as being the very worst of foes they have to contend with; also those social banes, working men's clubs—supplied greatly from that most dangerous of sources, grocers' stores—far more prolific of evil than the calling of the heavily rated, highly-rented, and closely-watched publican, so constant a martyr under the inquisitorial lash of the lynx-eyed policeman.

I am also glad to notice the following paragraph from a London correspondent's letter in to-day's paper:—"The ladies in several parts of London are entering upon another crusade against intemperance, and their first object of attack seems to be grocers' and confectioners' licences, with which they associate a great deal of the drinking which goes on among women. There can be no doubt that the increased number of such licences encourages habits of intemperance among women, and the licensed victuallers would not be sorry to see the fair advocates successful in their mission."

I am, Sir, yours faithfully,

Lytham, Jan. 13th, 1883. C. H. PRESGRAVE.

## "PHYSICIANS' PRESCRIPTIONS."

*To the Editor of* THE LANCET.

SIR,—This question is one which requires consideration. There are several matters to be discussed before it can be decided whose property the prescription is. Take the case reported in THE LANCET this week by "W. D. S. C.," who up to now has not convinced me that the lady was badly used. Did she pay a physician's fee for the prescription, and then pay for the medicine at the chemist's? If so, the prescription is hers; or did she pay the practitioner 2s. or 2s. 6d. for his advice, medicine included, which would be charged for by the chemist in his account to the practitioner? If so, the prescription was only a message to the chemist, and therefore not the property of the bearer any more than our morning letters are the property of the letter-carrier. In such a case the patient might just as well claim the cutting out of the day-book on which the surgeon has instructed his assistant what medicine to make up. The only difference is that in the one case it is written on a slip of paper instead of being in a bound volume. The chemist is *pro tem.* the practitioner's assistant. To say that people will not take their medicine because they do not possess the formula from which it was prepared is an absolute absurdity. How many people do know what they are taking? and if they did know it would be no protection from the effects of occasional blunders. If every patient who consults a practitioner is to be considered entitled to the custody of his prescription, with which henceforth to cure himself and his friends, the lot of the general practitioner of the future will be "not a happy one."

I am, Sir, your obedient servant,

January 22nd, 1883. HERBERT H. MEYERS.

*G. P.*—The relationship described in the statement of our correspondent is one of extreme delicacy and difficulty, out of which misunderstanding and distrust are very likely to arise. In the main we agree with our correspondent. It would be necessary to hear B's account of the facts, but it would be exceedingly difficult for him to justify the attendance on A's patient and giving no account of the fact to A.

THE communications of *Messrs. Tidy and Hodgkinson*, in reply to the letter of Mr. Blyth of last week, arrived too late for insertion in our present number.

## THE PUBLIC HEALTH ACT FOR CONTAGIOUS DISEASES.

*To the Editor of* THE LANCET.

SIR,—As the Committee on the Contagious Diseases Acts have decided that these Acts cannot be introduced into large towns, and we are informed by Mr. Lane that the fatal disease is fast increasing in this country, would you allow me to suggest that, by a very slight alteration in the Public Health Act, the sanitary inspectors, the Board of Health, and the parish authorities could effectually stamp it out. At present the Public Health Act can only deal with infectious diseases; the spread of purulent ophthalmia, ringworm, syphilis, &c., cannot be checked because they are not "infectious" diseases. By erasing the word "infectious" the sanitary inspectors could deal with all diseases, and no one would question their ability to do so.

There would not be the slightest necessity, in proposing this extension of the Public Health Act, to make any reference to the Contagious Diseases Acts. In those towns where it is admitted they cannot be applied, is there anyone, who has seen the fearful ravages syphilis is making on our army, navy, and population, who would not admit the necessity of applying some check to its spread? In those districts where the Contagious Diseases Acts are in force the sanitary inspectors would be most invaluable assistants to the naval and military surgeons and the police. The fact that Mr. Childers presented a petition for extending the Public Health Act to the treatment of all diseases, signed by 1200 of the most eminent members of the medical profession, must show how highly this change would be appreciated.

I am, Sir, your obedient servant,

Piccadilly, W., Jan. 15th, 1883. HENRY REECE, M.R.C.S.

*A roostook.*—We cannot imagine any circumstances which would make it right for the senior partner to refuse to put the name of the junior partner on his house in a way to lead to no misunderstanding as to residence.

*Union.*—We think the claim must be made through the guardians.

*Mr. Macnamara's* letter will appear next week.

## DEATHS FROM CHLOROFORM.

*To the Editor of* THE LANCET.

SIR,—I have read with great regret in THE LANCET the numerous accounts of recent deaths under chloroform and of the subsequent inquests. So far as I can judge, these deaths appear to be always charged to the patients, and the anæsthetic is never suspected of impurity. Is it not possible that impure or deteriorated chloroform, be the impurity or deterioration ever so slight, has something to do with the fatal result? and would it not be well to have a careful analysis of the drug under the administration of which a patient has died? Out of every half-dozen bottles which I receive here, one or two are always worthless, incapable of producing anæsthesia, the cork rotten, and the odour weak. Were I so unfortunate as to have an accident during inhalation, I should certainly have the drug put to the most careful tests.

I am, Sir, yours faithfully,

J. H. NANKIVELL, M.R.C.S.

Transkei, South Africa, Dec. 14th, 1882.

### "THE DOCTOR'S DREAM."

THE truthfulness of the description of the lot of many a village practitioner, set forth in the admirable lines headed as above in our contemporary, *Punch*, last week, and which we regret we have not space to reproduce, makes us almost believe that the writer is practically acquainted with the condition of which he writes, and that the hand that directed the pen has at one time or another held the scalpel.

*Inquirer.*—There is nothing unprofessional or contrary to the conduct of a gentleman in a medical man sending a bill for attendance to a clergyman. There seems an inconsistence in this particular in the procedure of the medical man at different times, for which possibly he might have an explanation. Clergymen, like other men, have their liabilities.

### THE SALICYLATES IN SCARLET FEVER.

*To the Editor of* THE LANCET.

SIR,—At the present time the following case may prove of interest:—Mrs. D——'s daughter, aged eight, was taken ill on Wednesday, December 20th, with sickness and feverishness. On Friday I saw her; she had sore-throat, fever, and rash out all over her body, and seemed to be very prostrate. I prescribed eight-grain doses of salicylate combined with a little decoction of logwood, as there was some diarrhœa. She continued her medicine four days, when, the more severe symptoms being quite gone, she was allowed to get up, and in a day or two was running about the house quite well. On Friday, December 29th, she was again taken with sickness and diarrhœa, dry tongue, thirst, &c.; skin very hot and dry. I prescribed bismuth, soda, and aromatic confection. Next day (December 30th) her tongue was red and very dry; throat very sore; intellect dull; chest, abdomen, back, and front covered with profuse scarlatina rash; skin burning hot; the diarrhœa and sickness were better. I ordered her eight-grain doses of salicylate every two hours.—Dec. 31st: Morning temperature 102°; tongue moist and red; child has taken her medicine regularly; rash well out; seems much better. To continue the medicine.—Jan. 1st: Temp. 102°; tongue still moist; rash dying away on chest, out on legs; pulse 120; throat sore; glands under jaw and side of neck enlarged; nose sore and discharging. To continue salicylate every three hours.—2nd: Nose discharging; glands not so swollen; child more cheerful; temp. 101·2°; pulse 100.—3rd: Temp. 102°; pulse 100; tongue moist and red; throat sore; rash almost disappeared; glandular swellings about the neck much better; discharge from nose continues.—4th: Refuses food and medicine; temp. 100·4°.—5th: Roof of mouth and tongue dry, covered with black fur; almost unconscious. She died at 9 P.M.

I wonder what the result would have been had I given my little patient the salicylate until at least a week had elapsed in her first attack. Her surroundings were highly insanitary. I have at present in the same house four patients undergoing treatment for scarlatina. They are progressing favourably. Another brother of the deceased is now convalescent from a severe attack, accompanied with anginose symptoms.

I am, Sir, yours faithfully,

Scunthorpe, Brigg, Jan. 8th, 1883. JAMES COULDREY.

*Theophilus.*—The law is very loose in the States, each of which has its own laws; but such degrees as our correspondent mentions would be honoured.

*A Young Reader* should ask for the reports of the Northampton Provident Dispensary, the Camberwell, and others.

### DEMERARA MEDICAL SERVICE.

*To the Editor of* THE LANCET.

SIR,—Judging by the extracts in last week's LANCET from the speech of the Government secretary at the Court of Policy in Georgetown, anyone would think that Demerara is an Eldorado, to be reached as soon as possible by young members of the profession—"£600 or £700 a year suddenly," "Finest in the world," &c. And yet they talk of improving the service! This seems rather a contradiction, but the explanation is simply that the salary is £300 a year, and if a man survive the ordeal of two or three years' incessant worry, he may then get a permanent appointment of £600 per annum, though he was induced to join the service on the understanding that he would get such an appointment after a few months' probation. They talk of improving the service because they cannot fill up the vacancies occurring where only a staff of twenty-seven men is kept. Notwithstanding that the Government recruits from any country in the world, and so long as an individual holds a qualification, be it British, continental, or American, he is eligible; and, as a matter of fact, several nationalities are represented.

I think the chief cause of complaint with the gentlemen who are in the service is their very unsettled condition, liable to instant dismissal at the whim of a petty tyrant, whose decision knows no appeal, liable to be sent into a district where all working materials are to be provided, and having to leave it again at a few hours' notice for another, where these things may or may not be required. Such removals may occur three or four or more times in a year, and they are quite expensive enough to take the gilt off the big salary, &c.; and so intolerable does such management become out there that in a single month last spring three men were actually worried into madness, two of whom committed suicide, and the third is now a pitiable wreck in Bethlem Asylum.

I am, Sir, yours truly,

Pimlico-road, London, W., Jan. 8th, 1883. J. T. SHIPSEY, M.D.

### IMPROMPTU ON THE VACCINE INOCULATION.

(From the *Morning Herald*, Friday, June 8th, 1803.)

WHEN Io's charms had amorous Jove estrang'd,
Saturnia to a cow her rival chang'd;
Then Venus cry'd, "The beauty you deface
Shall shield the beauties of a future race;
Her favoured offspring shall from earth remove
The direst foe of beauty! life! and love!"

*A. B. C.*—The annual election of Fellows into the Council of the Royal College of Surgeons will take place on the first Thursday in July. The election of President will take place the following Thursday.

### TREATMENT OF EPILEPSY.

*To the Editor of* THE LANCET.

SIR,—In your issue of Sept. 30th, 1882, "Alpha" asks for treatment likely to be useful in a case of "petit mal." I wish he and others who are bothered with those numerous cases of epilepsy in which the bromides have so little influence would try the tincture of cannabis indica in slowly increasing doses, and report the results, as it has been decidedly beneficial in the following case now under my care.

A healthy young saddler, aged twenty-six, never had syphilis, no epilepsy in family, lives quietly, had first fit about five years ago, followed for the first two or three years by others at long intervals. At the beginning of this year they became more frequent, and averaged, from January to July, about one in ten days, the longest interval being six weeks, while only once had he two in a day. I had tried bromide and iodide of potassium, and tincture of belladonna, combined or otherwise, in various doses, with little or no benefit. Early in July I commenced giving the tincture of cannabis indica in ten-minim doses three times a day in a little mucilage, gradually increasing the dose to half a drachm. As there had been no recurrence, I kept the dose at this for the last month, which I now think a mistake, as he had an attack last week, the first since July, or an interval of over twenty weeks. I shall now continue increasing the dose, and in about six months' time will write and tell you whether the improvement continues or is only temporary.

I am, Sir, yours faithfully,

Harrow, Victoria, Nov. 28th, 1882. F. D. HAYMAN, M.R.C.S.

*Mr. J. McDavidson.*—In the Transactions of the American Association for the Advancement of Science, session 1882.

*Mr. W. G. Radley.*—Balfour Stewart, for Natural Philosophy; for Chemistry, Roscoe (Macmillan).

### "MR. CLEMENT LUCAS ON ROUGE'S OPERATION FOR OZÆNA."

*To the Editor of* THE LANCET.

SIR,—I observe that Mr. Clement Lucas, in his article on "a case of ozæna for which Rouge's operation was twice performed," says, "I can only find that the operation has been performed in this country by three surgeons—viz., Messrs. Warrington Haward, Harrison Cripps, and Holmes." I should like to say that I remember Mr. Edmund Owen operating on two patients at St. Mary's Hospital, four or five years ago, after the manner of Rouge. One patient was a woman with intractable ozæna. On raising the labio-nasal flap, an exploration of the upper spongy bones revealed a small sequestrum lying in some suppurating tissues. This was removed. In a few days the patient was walking about the ward, and shortly left the hospital free from her trouble. In the other case the operation was undertaken for the treatment of a large crop of polypi, which were blocking the nasal cavity, and could not be got at in the usual way. The result of this operation was also highly satisfactory.

I am, Sir, your obedient servant,

Devonport-street, W., Jan. 22nd, 1883. F. ST. GEORGE MIVART.

*Mr. Woodhouse* is thanked for his polite and suggestive note, but we differ from him on almost every point raised.

*An Old Subscriber.*—1. L.S.A.—2. The licence is not a surgical qualification.

*Sanitary.*—The subject shall be kept in view.

### FRENCH EXAMINATIONS FOR OFFICIER DE SANTE.

*To the Editor of* THE LANCET.

SIR,—I ask some of your readers having knowledge of the above to help me by communicating any information which he may think useful to one intending to practise in France, such as the dates and places for examination, the subjects, and the degree of knowledge expected.

I am, Sir, your obedient servant,

January 22nd, 1883. MEDECIN.

*Philo-Justitia.*—We think the matter should not be noticed until it comes before the Medical Council.

*Mr. Cocks.*—The letter unfortunately has not been preserved.

### THE CAUSE OR CAUSES OF FOLLICULAR TONSILLITIS.

*To the Editor of* THE LANCET.

SIR,—As the cause of follicular tonsillitis appears to be at present so little understood, I shall be glad if those medical men in whose practices it has been prevailing of late will state their opinions as to its origin.

I am, Sir, your obedient servant

Kingston-on-Thames, Jan. 18th, 1883. F. P. ATKINSON.

## POST-PARTUM HÆMORRHAGE.

*To the Editor of* THE LANCET.

SIR,—The cases in which the injection of perchloride of iron fails to arrest post-partum hæmorrhage are so comparatively rare that the following particulars may interest your readers.

The patient in question, Mrs. J. O——, was a thin, spare woman, thirty-three years of age. Her general health had always been good. In all her previous confinements there had been considerable difficulty in extracting the placenta. On a previous occasion it had been extracted piecemeal, with subsequent profuse post-partum hæmorrhage, and a tedious recovery. In her last confinement (eighteen months ago) I managed to peel it off entire; good uterine contraction followed, and she recovered well. During her last pregnancy she had been in good health. On December 7th there were irregular back pains, with some discharge of liquor amnii, but labour did not set in until the next day at 3 P.M. The presentation was normal, and in an hour a fair-sized male child was born. The uterus at first contracted well, but in a few minutes it relaxed, and hæmorrhage commenced. Traction on the cord failed, and, knowing her condition by former experience, I introduced my hand into the uterus. I was unable to peel off the placenta entire, and had to extract it piecemeal, an operation that took me three or four minutes. The hæmorrhage was very free, and, as it continued, I introduced a tube into the fundus uteri and injected a stream of warm water. This proceeding caused good uterine contraction, and stayed the bleeding for perhaps twenty minutes. During the next hour the hæmorrhage kept occurring at intervals, despite the use of hot water, ice, ergot, kneading the uterus, &c.; and as her condition was becoming critical, I decided to inject perchloride of iron. Sixteen ounces of the solution (one part solution of perchloride of iron to three parts water) were injected during the next five minutes. This had the effect of apparently checking the hæmorrhage, but no improvement followed, and I found on examination that the uterus (on which no external pressure had been made since the iron injections) and vagina were full of clots the colour and consistence of coffee-grounds and syrup. These were cleared away, and the iron injection repeated. The patient, however, became more and more restless, and died of exhaustion at 8 P.M., four hours after the birth of the child, and about two hours and a half after the first application of the iron to the uterus.

It has since occurred to me that post-partum hæmorrhage could be controlled by the following apparatus:—A large, thin, indiarubber bag, mounted (after the manner of the epistaxis apparatus) on a large, hollow, elastic gum-stem, through which it could be rapidly distended with warm water. The stem is to be connected by indiarubber tubing with the bottom of a can of warm water, which could be placed at any level above the patient. The bag, which would require to be of such a size as to allow of its filling the uterus, to be introduced in its collapsed state. On connecting the bag with the can there would be an amount of pressure on the interior of the uterus, which could be regulated at pleasure by raising or lowering the can. It could be made sufficient to check all hæmorrhage, and could be gradually dispensed with as the uterus regains its power of contraction.

I am, Sir, yours, &c.,

Uitenhage, Cape Colony, Dec. 23rd, 1882. ARTHUR B. VANES.

ERRATA.—In the report of the Ophthalmological Society last week, Mr. Higgens, in the discussion on Mr. T. Smith's paper, asked whether any explanation was afforded why at an early stage cataractous subjects sometimes become *myopic*, not *hypermetropic*. In Dr. Lees case of paralysis of the third nerve the dilated pupil measured 2·5 millimetres, and he referred to the fact that in ophthalmoplegia *interna* there is no dilatation of the pupil.—In the report of the Medical Society, Dr. Hall showed the case of Anæsthesia and Analgesia on behalf of Dr. Donkin, under whose care at the East London Hospital for Children the patient was.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir William MacCormac, London; Dr. Sansom, London; Dr. Hudson, Leeds; Dr. K. N. Macdonald, Cupar; Dr. Whitson, Glasgow; Mr. Baddeley; Mr. Snell, Sheffield; Dr. Norman Kerr, London; Miss Stephenson, London; Dr. Alfred Wise, Wiesen; Mr. Robinson, Tynemouth; Dr. Hardcastle, London; Mr. Macnamara, London; Mr. G. F. Allen, Pietermaritsburg; Dr. Octavius Sturges, London; Dr. Czartoryski, California; Dr. G. Harley, London; Dr. Kirkman, St. Leonards; Mr. Noble Smith, London; Mr. T. S. Smith, Sittingbourne; Mr. Barr, Liverpool; Mr. Jeaffreson, Newcastle-on-Tyne; Dr. Herman, London; Mr. Radley, Newton Abbot; Mr. P. Chalmers; Mr. Jordan Lloyd, Birmingham; Dr. Robert Barnes, London; Mr. Reginald Harrison, Liverpool; Mr. H. H. Meyers; Mr. Burman, Wath; Mr. Stenson Hooker, Midhurst; Mr. F. St. G. Mivart, London; Messrs. Bower; Mr. Barton, Brookwood; Dr. McClewer, Worle; Messrs. King and Co., Manchester; Mr. Berridge, Loughboro'; Mr. Barley, Portsea; Mrs. Jones, Newcastle-on-Tyne; Messrs. Mitchell and Co., Aberdeen; Mr. Chamberlain, Norwich; Mr. Watkins, Worcester; Dr. Mason, Sudbury; Mr. Logan, Newcastle; Mr. Macpherson, Middlesbro'; Dr. C. Hewitt, London; Messrs. Lee and Nightingale, Edinburgh; Messrs. McLachlan and Co., Edinburgh; Mrs. Skinner, Winchelsea; Dr. A. P. Squire, London; Mr. Stephens; Captain Douglas Galton, London; Dr. Stein, New York; Mr. Palmer, Newbury; Dr. Ransom, Nottingham; Mr. Crombie, London; Mr. T. Walley, Edinburgh; Dr. Jos. Rogers, London; Dr. Joseph Ewart, Brighton; Dr. Vandyke Carter, Bombay; Dr. Pavy, London; Dr. W. R. Smith, Cheltenham; Mr. Shiels, Sutton Scolney; Mr. Fox, Manchester; Mr. Townsend, Exeter; Dr. Mackey, Crook; Miss Freeman; Dr. Taylor, West Brighton; Dr. G. de Toledo P. e Almeida, Brazil; Mr. Battams, London; Dr. Ilott, Bromley; Mr. Woodhouse, Hertford; Mr. May, Moreton Hampstead; Mr. Oswald, Clapham; Mr. Hodgkinson, London; Mr. Richmond, Warrington; Mr. Stephenson, Aldershot; Mr. Clarke; Mr. Smith, London; Sanitary; M.R.C.S.; A.M.D.; A Young Reader; M.D., Croydon; H. B.; G. P.; K. F. G.; Nautilus; M. T.; Apis, York; S.; J. B.; Philo-Justitia; Constant Reader; An Old Subscriber; Union; Inquirer; Médecine; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Moullin, Lyss; Messrs. Evans and Co., Liverpool; Mr. McFearson; Dr. Bath, Blackburn; Mr. Forman, Denton; Dr. Jones, Resolven; Dr. Dobell, London; Mr. Souter, Norwood; Mr. Hetherington; Mr. Gosse, Bath; Dr. Campbell Black, Glasgow; Mr. Leeming; Mr. Edwards, Llandyfilin; Mr. Stevens, Howden; Messrs. Fannin and Co., Dublin; Dr. Johnston, Sheffield; Mr. O'Donnell, Castlebar; Mr. McKenna, London; Mr. Squire, London; Mr. Darke; Mr. Maloney, Charlbury; Miss de Winton, Llandrindod; Dr. Lane, Victoria-park; Mr. Le Page, Durham; Dr. Norton, Bournemouth; Mr. Guy, Malvern; Mr. Thin, Edinburgh; Mr. Parrott, Hayes; Mr. George, Liverpool; Mr. Walker, Crick; Dr. Black, Swansea; Mr. Woodland, London; Mr. Parsons, Newhaven; Mr. Bryan, London; Mr. Ralfe, Gorey; Mr. Marrett, Peterboro'; Mr. Brockelbank, Islington; Messrs. Hayes and Son, Peterboro'; Mr. Chamberlin, Norwich; Dr. Crowther, Laddenden; Mr. Utting, Clifton; Mr. Elliott, Carlisle; J. B., Coleshill; Socrates; Permanent; H. L. F., London; Medicus, Sheffield; S. G. W.; E., Bradford; Medicus, Salford; H. P., Stockport; Medicus, Hampstead; L.; X. Y. Z.; Goodchance, Manchester; W. J. B., Boro'; Lunacy Specialist; Marland, Southampton; H. B., Chester; A. B., Southsea; Semper eadem; X. Y. Z.; Medicus, Worthing; Alpha, Birmingham; Medicus, Seaford; Medicus, Millwall; G. B., Manchester; W. H. C., Staple-hill; Beta; A. B., West Hartlepool; M.D.; &c., &c.

*Lytham and Kirkham Times, Sanitary News, Hobart Mercury, Church of England Temperance Chronicle, Pulman's Weekly News, Launceston Examiner, &c.*, have been received.


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